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**DESCRIPTIONS OF NEW GENERA AND SPECIES  
OF NOCTUIDÆ.**

BY JOHN B. SMITH, SC. D.

One of the least attractive parts of entomological work is, to me, the description of new species, and wherever possible I put it off until I can monograph the groups to which the species belong; first, because there is less danger of making bad synonyms; second, because the species can be compared by means of tabular synopses, and recognition rendered more easy. There is a difficulty in practically adhering to this rule, from the fact that new species are constantly turning up, and that a monograph scarcely off the press, becomes incomplete as soon as a batch of material is received from a new locality. While it is unusual to receive new material now-a-days from the Eastern, Middle or Central States, the Southern States still contain much that will have to be described, and the supply of new species from the Rocky Mountain chains seems inexhaustible.

By far the greater number of species described in this paper are of this Rocky Mountain fauna, and the bulk of them come from a few collectors.

Mr. Bruce, as usual, contributes a large share of the species, some of them collected in 1892, but others taken years back, and which have been awaiting further material. Not all the species determined as undescribed in his collections of 1892 are here characterized; a number of them were represented in the material sent me by single specimens only, and most of these were returned to Mr. Bruce with a request for additional examples if they were to be had. As I have had no response, I take it that there are no further specimens available.

Dr. William Barnes, Decatur, Ill., sent me for determination a very large and most interesting lot of specimens, mostly taken at Glenwood Springs, Colo. This lot is especially valuable, because the collections covered a large part of the season, because the specimens are dated, and because the locality is exact, and not merely "Colo."

Mr. Thomas E. Bean, Field P. O., British Columbia, sent me a very interesting lot of specimens taken there and at Laggan, Alberta Province, and containing some quite remarkable species.

Finally, Mr. Neumoegen has sent me, at odd times, specimens to which he was desirous of having the names affixed.

A notable feature of the fauna from which I am describing, is the very large number of species of *Oncocnemis*, or allied forms. They form a distinctive feature, and fix the true home of the genus, of which the European fauna boasts but four species; thirty-one species are recorded in my check-list; one species is added in a short paper on the Noctuidæ of the Death Valley Expedition, and six specimens are here first described as new—a total of forty-three species.

The agrotid series yet furnishes additions to our list, and most of them of the *Carneades* type.

Four additional species of *Xylomiges*, so soon after the genus had been monographed were unexpected, and in *Cucullia*, a handsome and large new form is a striking addition.

The location of the types of the species is indicated in most instances, and wherever they are in my personal control they will be deposited in the U. S. National Museum.

Finally, a few words concerning the plates. Pictures are undoubtedly a very great aid to the determination of species; but good pictures have been very expensive in the past, and are not cheap even yet. Recently, photography and reproductions from photographs have become so vastly improved, that I concluded to try this method of illustration to test its usefulness. Color values can now be indicated in many cases by the use of orthochromatic plates, though even with these, if the specimens are not reasonably similar in general tint failure will result, because, while some may be over exposed, others will present little or no contrast.

In the reproduction, all minute detail is lost. By the cross-hatching, which all these methods require, fine powderings obvious enough in the photograph are lost, and a general impression only is given. Yet even this is a very great assistance, and I believe that in most instances the species described in this paper can be recognized more easily than they could have been by verbal descriptions alone.

#### **EPIDEMAS** gen. nov.

Head moderate in size, retracted, front smooth, palpi small and weak, little exceeding the front, drooping. The tongue is weak and short, practically obsolete; the eyes are naked, with a distinct fringing of hairy lashes at the posterior border. The antennæ in the

male are distinctly serrated, the teeth furnished with tufts of stiff hairs; in the female they are simple. The thorax is short, stout, quadrate, the vestiture rather long, loose, and fluffy, composed of flattened hair rather than scales, and forming no distinct tufts, though the edges of the patagiæ are well marked. The abdomen is comparatively short, though exceeding the secondaries, and it is longer in the female than in the male. In the latter there is a very small basal tuft on the dorsum, and laterally the segments are obviously tufted. The legs are short, not very much longer posteriorly, nor very stout; not spinose, nor are the anterior armed in any way at tip. The wings are short and rather narrow, the primaries pointed at tip, the outer margin very oblique, somewhat less so in the female: the secondaries are proportionate to the primaries. The venation is normal, vein 5 of the secondaries distinct, but obviously weaker than the others.

In appearance this genus is a curiously intermediate form between *Demas* and *Dicopis*, with some of the characters of each and some peculiar to itself. In the wing form, and in the stout thorax and short abdomen it resembles *Dicopis*, but in the habitus and maculation the resemblance to *Demas* is most marked. The unarmed fore tibiæ exclude the genus from the Dicopinæ, with which it might otherwise have been well enough associated. It also has very decided resemblances to *Feralia*, and it is between this genus and *Demas* that I propose to place the new form.

**Epidemas cinerea** n. sp. (Pl. iv, figs. 10 ♂, 12 ♀).—Ground color ashen gray, powdery. Head and thorax concolorous, immaculate, except that there is a more or less distinct black submargin to the patagiæ. Primaries quite strongly black and white powdered, all the normal maculation fairly distinct. Basal line barely indicated on the costa; t. a. line distinct, geminate, defining lines black, the included space white and contrasting; in course it is outcurved, somewhat drawn in on the subcostal vein; t. p. line geminate, strongly outcurved over the reniform, then evenly oblique, parallel with the outer margin. The inner defining line is distinct and black, the outer more or less indistinct and partly obsolete, the included space white; s. t. line white, irregular, incomplete, more or less defined by blackish powderings preceding or following it. A series of blackish terminal lunules; fringes cut with pale and dark gray, and with a dark interline. A triangular black dash in the submedian interspace at base, which sometimes does not reach the t. a. line. Claviform prominent, extending across the median space, very distinctly black margined inferiorly, less well defined above, included space white or very light gray. Orbicular of good size, oblong, oblique, black ringed and white centered. Reniform large, upright, inwardly defined by a black line, outwardly vague, shading off into the ground color; or in some cases marked by a whitish annulus; usually it is somewhat

paler than the ground color, but in some cases there is very little or no difference. Secondaries white, black powdered, with a vague outer transverse line and a distinct, marginal line. Beneath white, powdery, both wings with a blackish discal spot. Expands 30-35 mm.; 1.20-1.40 inches.

*Hab.*—Glenwood Springs, Colo., September and October, Barnes; ten specimens.

In the series before me very little variation is observable, except in the somewhat lighter or darker ground color, and the relatively more or less distinct ornamentation. None of the specimens are perfect, and all of them bear the ear marks of electric light captures. The males at first sight have quite a strong habitual resemblance to *Charadra palata* Grt.

**Chytonix connecta** n. sp. (Pl. iv, fig. 2)—Ground color a dull luteo-fuscous, powdery. Head and thorax concolorous, immaculate. Primaries with the basal space and the median space below the dash connecting the median lines, dark smoky brown. Basal line single, black, distinct, extending to the short basal black dash. T. a. line black, single, a little outwardly oblique, even to the median vein, then dentate to the hind margin. T. p. line single, black, rather slender toward the costa, slightly irregular, forming one distinct angle opposite the median vein: below this point a distinct white line follows the black, and there is a somewhat diffuse powdering beyond that point. The s. t. line is fragmentary, very irregular, marked toward the apex by white scales, hardly distinguishable below that point. There is a narrow lunulate terminal line. A fine brown median line is fairly well marked, and makes a long outward angle below the reniform. A narrow black line connects the median lines, defined rather strongly by the contrast between the dark shade below it and the unusually light yellowish tinged space above. In this pale shade the large ordinary spots are evident, though by no means well defined. The orbicular is round, incompletely outlined by brown scales. The reniform is yet less well defined, and is kidney-shaped. Between veins 4 and 5, a black line extends from the cell to the outer margin. The subterminal space is more or less powdered with white scales, and similar scales are less abundantly scattered in other parts of the wing. Secondaries smoky brown with greenish white blotches toward the outer margin; the fringes being of the same pale shade, but based by a series of blackish lunules. Beneath brownish gray, powdery, primaries with an outer transverse dark line and a pale discal lunule; secondaries with a broad subbasal line, an extramedian denticulated line, a submarginal broad dusky shade, and a narrow broken terminal line. Expands 37 mm.; 1.50 inches.

*Hab.*—Texas, Graef.

A single female specimen only. The species is rather closely allied in appearance to *C. sensilis* Grote, but differs markedly in details. There will be no difficulty in recognizing it, I think.

**Setagrotis terrifica** n. sp. (Pl. ii, fig. 2)—Ground color of head, thorax and primaries a dirty pale luteous, with a more or less prominent admixture of whitish scales; collar with a rather vague brownish transverse line, else thorax

immaculate. Primaries sparsely black powdered, all the maculation imperfect. Basal line vaguely marked on the costa only. T. a. line obsoletely geminate, the inner line faintly indicated, the outer line made up of blackish scales, almost upright save below the submedian vein, where it is outcurved. T. p. line geminate, the outer line marked in the costal region only, inner line dark brown, outcurved over the cell and oblique below that point, where also the line becomes outwardly denticulate on the veins. The s. t. line is indicated by a series of irregular, vague fuscous spots. A series of brown or blackish terminal lunules. A small longitudinal black mark at base, scarcely reaching to t. a. line. Claviform small, with a narrow black outline, paler than ground color. The cell before and between the ordinary spots is more or less completely black-filled. Orbicular oval, irregular, incompletely outlined, open to the costa, whitish filled. Reniform small, upright, scarcely kidney-shaped, whitish, with the centre of ground color. Secondaries white, the veins fuscous powdered, a fuscous discal lunule and a fuscous terminal line. Beneath white, fuscous powdered, both pairs of wings with discal dots and more or less complete outer transverse lines. Expands 34-35 mm. ; 1.36-1.40 inches.

*Hab.*—Colorado, Bruce; No. 51.

Two male specimens are before me, differing somewhat in the ground color. In the darker specimen the basal space, costal region and s. t. space are somewhat paler. The body is robust, the vestiture shaggy and somewhat loose, and the antennæ are unusually long, reaching three-fourths of the distance to the apex of the wing. The tuft of bristles to each joint is unusually long, quite different from the other species referred to the genus. The species is a very interesting one, strongly resembling some of the *Carneades* series. It will be easily separable from the other described species by the pale clay ground color.

***Peridroma nigra*** n. sp. (Pl. i, lower centre figure)—Dark, blackish powdery over a smoky brown base. Head, thorax and abdomen almost concolorous, the latter somewhat lighter in shade. Primaries with all the markings present, and all more or less broken or interrupted. Basal half line black, geminate, the included space whitish powdered, terminating inferiorly in a reddish ocherous blotch at the base of the wing. T. a. line geminate, defining lines blackish, intermediate space with intermixed whitish and ocherous scales; nearly upright, an outcurve above the costal and below the submedian vein. A blackish, diffuse and vague median shade line. T. p. line geminate, inner defining line lunulate, the outer hardly distinct from the s. t. space, the interval whitish and ocherous powdered, this powdering extending into the median space a variable distance, and either the ocherous or the white scales may predominate. S. t. line whitish or ocherous, irregular, interrupted, preceded by more or less evident black lunules. A series of black terminal lunules. Claviform small, black marked, with a more or less obvious powdering of white and ocherous scales. Orbicular irregular, oblique, narrowly ringed with black, within which is a white annulus, the centre concolorous or whitish powdered. Reniform large, kidney-shaped, narrowly black-ringed, within which a series of white or ocherous scales indicates

an annulus; the centre pale powdered. Secondaries dirty white, powdery, with a clearer outer border, a dusky terminal line and a vague extra median line and discal dot. Beneath whitish, powdery, disc of primaries darker; a more or less obvious outer line and discal lunule. Expands 50 (♂) to 53 (♀) mm.; 2-2.12 in.

*Hab.*—Colorado, Bruce (No. 231 and 462); Salt Lake City, Utah, Hy. Edwards.

Two specimens (♀) from Mr. Bruce are before me, one of them marked "9, 2, 88," the other without date. In the Hy. Edwards collection there are also two specimens, which I have compared with them but not labeled.

The species while it has the facies and style of maculation of *astriata* and *occulta* is obviously distinct by its dark color and powdery markings. In the male before me the ocherous powderings predominate over white, while in the female the reverse is the case.

The picture is from the female.

#### **PRONOTUA** n. gen.

Head distinct, eyes large, front smooth, palpi moderate, the second joint clubbed at tip, terminal joint small; tongue stout and long. Antennæ in the male simple. Thorax moderate, hardly depressed, but not strongly convex; untufted, or with very inconspicuous tufts merely. Abdomen moderate, in the female somewhat depressed, untufted; middle and posterior tibiæ spinose, anterior unarmed. The legs as a whole are stout, greatly lengthening posteriorly. Wings large, primaries trigonate, with rectangular apices; secondaries with a slight cut below the apex.

Resembles *Noctua* most closely in habitus and in structural characters, but differs in having the anterior tibiæ unarmed, and also in having the slight cut below apex of the secondaries. In the table of genera in my revision of the Agrotids, this genus would be associated with *Adelphagrotis* and *Euretagrotis*, differing from all of them by the depressed appearance, and by the untufted thorax. The genus is described for a species which has been in my hands for some time, and it will also receive *Agrotis pyrophiloides*, which, I have already stated, agreed with none of the genera accepted by me as belonging to the typical Agrotids. The latter species differs somewhat from the new form in that the thorax is less depressed, and the vestiture forms indefinite tuftings, but otherwise the two are sufficiently allied.

**Pronoctua typica** n. sp. (Pl. iv, fig. 1)—Ground color a reddish luteous. Front of head blackish brown, vertex yellowish. Thorax concolorous. Primaries more or less black powdered, all the normal markings present. Basal line geminate, blackish, not strongly marked. T. a. line outwardly oblique, and outcurved between the veins: geminate, the inner line indistinct, the outer black and distinct. T. p. line single, black, strongly denticulate, outcurved over the reniform, almost evenly oblique below. S. t. line irregular, concolorous, marked by a dusky preceding shade. A series of indistinct terminal dots. Fringes pale, with a dusky interline. A broad, diffuse, blackish median shade, obscuring the reniform, and darkening the outer part of the median space. Claviform wanting. Orbicular small or moderate, concolorous, indistinctly outlined, centred with blackish. Reniform upright, of good size, kidney-shaped, black ringed, more or less obscured by the dusky median shade. Secondaries yellowish fuscous, shining, the veins somewhat darker, and the fringes paler. Beneath very pale yellowish, with an incomplete outer line and discal spot on all wings. Expands 44–48 mm.; 1.75–1.92 inches.

*Hab.*—Colorado, Bruce; Nos. 229, 491.

This is a large species, and is not unlike my *clemens* in appearance, but is more red in color. In the pattern of maculation it is like its congener, *pyrophiloides*.

**Noctua flavotincta** n. sp. (Pl. i, first row, fig. 2)—Head and thorax a rather pallid yellowish; palpi chestnut-brown laterally; vertex tipped with scales of the same brown; collar brown, with a dark tip and central line; a small thoracic crest immediately behind the collar, also brown. The breast and a fringing to the legs is of the same tint. Primaries brown, basal space largely yellow tinted, especially at costa, along which the same tint extends to the s. t. space and there crosses the wing as a marginal shading to the t. p. line. Basal half line black marked across the pallid costa. T. a. line indistinctly geminate, the outer part of the line black, the inner portion defined inferiorly only by the contrast between the pale filling and the more brownish base. In course the line is outwardly oblique, a little bent on the cell in one specimen, and with a rather distinct outcurve below the submedian vein. T. p. line rather evenly outcurved, indistinctly geminate, the inner parts distinctly margined by the brown median space, the yellow filling outwardly rather diffuse between the veins which are dusky, giving a somewhat radiate appearance. The s. t. space darkens outwardly, sharply defining the somewhat irregular s. t. line; the latter is yellow, outwardly diffuse. The terminal space is concolorous or somewhat paler, in the latter case with a dusky terminal line; the fringes also with a dark interline. A black dash at base, not crossing t. a. line. Claviform moderate, black-filled. Median cell before and between the ordinary spots black-filled. Reniform upright, somewhat constricted centrally and dilated, decanter-like, inferiorly; a narrow, pale annulus and a central pale line, else concolorous with the orbicular. Orbicular oblique, narrow ovate, touching the pallid costa, but completely ringed by a paler yellow annulus and somewhat paler centred than ground color. Secondaries fuscous, somewhat paler basally; an indefinite discal lunule. Fringes rather contrasting, yellowish. Beneath, primaries blackish, the margins yellowish brown; secondaries yellowish, black powdered, with an outer black line and discal lunule. Expands 34 mm.; 1.36 inches.



*Hab.*—British Columbia.

Two males, collected by Mr. C. J. Weidt, are before me. The species is most nearly related to *oblata* Morr.; but differs obviously in the coloration and maculation. I do not know of any species with which it could be easily confused.

***Carneades siccata*** n. sp. (Pl. ii, fig. 1).—Very pale, whitish gray, with a more or less obvious yellowish tinge. Head and thorax immaculate. Primaries more or less powdered with black scales, often darkening the subterminal spaces. Basal line present, black, geminate, interrupted. T. a. line black, geminate, inner line diffuse, powdery, outer line outcurved between the veins, slightly oblique in general course. T. p. line black, geminate, the outer line lost in the black powderings, the inner line lunulate, variable in distinctness, in one case almost obsolete; in general course it is evenly and not greatly outcurved over the cell and rather evenly oblique below. S. t. line of the ground color, irregularly but not greatly sinuate, relieved by the dark powderings in the s. t. and terminal spaces, and distinct in proportion to the amount of these powderings. A blackish diffuse median shade, variable in distinctness, crosses the wing between the ordinary spots. A series of more or less obvious black terminal lunules. Claviform wanting in the specimens. Reniform large, kidney-shaped, black, forming a prominent feature in the wing. Secondaries white, veins and a slender discal lunule a little fuscous. Beneath white, with blackish powderings along the costa and an indefinite discal spot on all wings. Expands 34–37 mm.; 1.36–1.48 inches.

*Hab.*—Colorado, Bruce; No. 140.

Two males and one female are before me, differing quite markedly in the amount of the black powderings on the primaries. In one case the s. t. space is entirely dusky, in the next it is half black, intense at the s. t. line and shading out toward the t. p. line; in the third the space is only very slightly more powdered than the rest of the wing. The thoracic vestiture is dense, loose and divergent, the antennæ of the male bipectinated. This latter character forbids the reference of the species to any of the established groups of the genus, and it is the first thus far described with pectinated antennæ. I considered it at first a *Porosagrotis* allied to *rileyana*, some forms of which it resembles quite closely, but the sexual characters are distinctly those of *Carneades*, the bifurcated clasper being very obvious.

***Carneades edictalis*** n. sp. (Pl. ii, fig. 3).—Dull fuscous in general color. A blackish line across collar, else head and thorax concolorous. Basal line geminate, black, variably distinct, but always interrupted on the cell. T. a. line geminate, outcurved between the veins, slightly oblique outwardly in general course. The inner line is brown and somewhat diffuse, the outer black and better defined. T. p. line geminate, the outer line vague, the inner blackish, crenulate in its course, evenly outcurved over the cell, and as evenly oblique

below that point. S. t. line broken, concolorous, defined by a series of irregular brown spots and shades in the s. t. space and a generally darker tint in the terminal lunules. Claviform small, concolorous, outlined by a narrow black line. Orbicular round, somewhat paler, variable in size, defined by black scales and by a blackish shade preceding it and continuing between it and the reniform. The latter is large, upright, somewhat constricted medially, inferiorly dusky, else concolorous. Secondaries fuscous, with a faint discal lunule. Beneath paler than above, powdery, with a broad outer dark band and a dark discal lunule on all wings. Expands 35-38 mm.; 1.40-1.52 inches.

*Hab.*—Colorado, Bruce; Nos. 70, 207, 326.

Mr. Bruce has sent me three specimens, all of them males, and all much alike. One of them is labeled "Salida, 4, 18, 88," the others are more recent captures. The species is simply and quite normally marked, and very much resembles some forms of *brunneigera* in appearance, save that it lacks the median shade line and is more robust in appearance. The antennæ of the male are pectinated, and the species is therefore allied to the preceding (*siccata*), from which it differs at a glance by the totally different ground color, and in many details of maculation.

**Carneades segregata** n. sp. (Pl. iv, fig. 6)—Ground color very pale luteous. Head grayish, collar pale creamy yellow inferiorly, limited by a black line, above which the color is dull gray. Thorax dull luteous gray, disc more yellowish. Primaries luteous, paler along the costa and internal margin, a smoky shade through the centre of the wing to the t. p. line, becoming blackish in the cell, and again appearing in the terminal space. Basal line visible only as a pale spot cutting a basal black dash, which extends below the median vein. T. a. line pale through the dusky central shade, obsolete in the costal region and along the internal margin. T. p. line obsolete, marked only as limiting the outer margin of the central dusky shade. S. t. line variably marked, pale, emphasized by the dark terminal space and by dusky or black preceding dashes and shades, varying in the specimens. A series of black terminal lunules. Fringes whitish. Claviform moderate in size, black ringed and dark filled. A black, slender line extends from its tip to the anal angle through the middle of the submedian interspace. Orbicular moderate in size, oblique, open to the costa, narrowly black ringed and centred with a very pale yellow. Reniform upright, kidney-shaped, narrowly black ringed, annulate with white, and gray centred. Secondaries in the male whitish, with smoky veins and an indefinite smoky outer border; the fringes white. Beneath whitish, immaculate, except for a dusky discal dot, which, in the secondaries, is faintly visible on the upperside. Expands 31-36 mm.; 1.25-1.45 inches.

*Hab.*—Colorado.

Seven specimens of this species are before me, all of them males. Two of them are from Mr. Bruce, the others from various sources, none of them with the exact locality. The insect resembles *wilsonii* most nearly in color and in general appearance, but differs in that

the costa is not concave. The terminal space is indented on veins 3 and 4 by pale streaks on those veins, and it therefore belongs to the 4-*dentata* group of the genus. In the specimeus before me there is some difference in the amount of the indentation, but it is distinct in all cases, and the s. t. line itself is in some cases scarcely visible. The antennæ are really shortly pectinated rather than serrated, the short branches furnished with bunches of bristles. As it appears now, this species might head the series following immediately after the *wilsonii* group.

**Carneades lætificans** n. sp. (Pl. iv, fig. 3)—Ground color a smoky red-brown. Collar at base gray in the female, yellow in the male, in both cases limited above by a black line, above which the ground color obtains. Thorax concolorous, the edges of the patagiæ a little lighter. Primaries with the costal region to the t. p. line yellowish in the male, gray in the female, the region along the internal margin also lighter than the remainder of the wing, but not so pale as the costal region. The cell is black filled before and around the ordinary spots. Basal line traceable as a pale dot in the black basal dash below the median vein. T. a. line marked as a pale line through the dusky region below the median vein, the pale color a little defined by a few black scales. T. p. line marked only by the contrast between the dark central portion of the median space, and the paler s. t. space. S. t. line marked only by the contrast between the pale s. t. and dark terminal space. This dark terminal shade does not extend to the apex, and is quite strongly indented on veins 3 and 4. A series of black terminal lunules, followed by a pale line at the base of the fringes. Median vein white to the end of the cell. A black basal dash extends to the t. a. line, beyond which the claviform is attached in the form of a small black loop. Orbicular oval, oblique, open to the costa, white or yellow ringed, with dusky centre. Reniform of good size, kidney-shaped, white ringed, with a gray centre. Secondaries white in the male, smoky in the female, in each case the veins and an outer line darker, fringes again paler. Beneath whitish. Primaries smoky outwardly, secondaries powdery along the costa. In the female there is an incomplete outer line on the primaries, and a distinct discal spot on the secondaries. Expands 32.5–34.5 mm.; 1.30–1.38 inches.

*Hab.*—Glenwood Springs, Colo., September: Barnes, Nos. 128 and 160.

This species is an ally of *segregata*, than which it is much darker; yet with exactly the same pattern of maculation. I considered the possibility of their being local forms of the same species until I found that in this type the male antennæ are distinctly serrate only and not shortly pectinated as in the other. There is quite a difference between the sexes, as the species is represented in my hands; but it is scarcely likely that this same difference will be equally marked in the general run of the specimens.

The species might be listed next after *segregata*, than which it has also somewhat more stumpy primaries.

**Carneades candida** n. sp. (Pl. iii, fig. 4)—Ground color a soft mouse-gray over luteous. Head inferiorly paler or luteous, superiorly gray. Collar somewhat mottled gray and luteous, with a blackish central line and a luteous tip. Disc of thorax and patagiæ gray, the margins of the latter and the tips of the tuftings formed of luteous scales. Abdomen white, with a very faint yellowish tinge. Primaries with all the maculation indistinct and interrupted, the ground color somewhat mottled. In the basal space the luteous tinge predominates; in the median space the mouse-gray obtains, but there is a luteous shade through the submedian interspace, lightening the claviform, and another through the cell, including the ordinary spots; the narrow s. t. space is powdery luteous, and the terminal space is evenly gray. Basal line geminate, blackish, not at all prominent. T. a. line geminate, marked by blackish costal spots, thence more gray, almost upright, somewhat outcurved in the interspaces. T. p. line geminate, marked by black spots on the costa, thence interrupted, the outer line even, little defined, the inner better marked, lunulate, as a whole with a very even outcurve from costa to the cell and thence oblique to the margin. S. t. line irregular, marked chiefly by the contrast between the s. t. and terminal spaces. A series of small blackish, terminal lunules. A yellowish line at the base of fringes. Claviform moderate, outlined by black scales, filled with luteous. Ordinary spots small, orbicular round, reniform somewhat oblique, both indefinitely outlined, but made more definite by the filling of luteous scales. Secondaries pure, snow white, the veins slightly yellow tinted. Beneath, primaries powdery white, the black atoms more numerous outwardly, forming a vague discal spot, a more definite outer line and a series of terminal lunules; secondaries white. Expands 33 mm.; 1.30 inches.

*Hab.*—Boulder, Mont.

Mr. Schoenborn has both sexes, taken by Mr. Titus Ulke. The species belongs to the *pitychrous* series, and is an ally of *mærens*, from which it differs in the even mouse-gray color, mottled by luteous scales, and in the pure white secondaries of both sexes. Species in this series are closely allied; but I believe that the present is entitled to rank as such without doubt.

**Carneades mitis** n. sp. (Pl. iii, fig. 10)—Ground color reddish luteous, powdered with black. Head and thorax concolorous, immaculate. Primaries with all the maculation vague, indistinct. Basal line single, blackish, very near to the root of the wing. T. a. line geminate, slightly oblique, outcurved between the veins, inner line indefinite, of the ground color; outer line blackish, fairly distinct. T. p. line rather evenly crenulated, simple, blackish, only fairly evident, followed by a slightly paler shade. S. t. line a little paler, somewhat defined by a vague blackish preceding shade, a very little irregular. A series of small terminal dots, and a pale line at the base of the fringes. There is a very vague median shade line, which in the male darkens the cell between the ordinary spots, but is with difficulty traceable in the female. The claviform is wanting, and the ordinary spots are so indefinite as to be practically indescribable.

ble; all that can be said of them is, that both are of good size, and as far as can be made out, of the normal form. Secondaries white in both sexes, immaculate. Beneath whitish, primaries with an incomplete outer line; secondaries with a discal dot. Expands 30-34 mm.; 1.20-1.36 inches.

*Hab.*—Glenwood Springs, Colo., September; Barnes, No. 44, 283, 284.

Two males and one female are before me, all of them in fair condition. The species is an ally of *cænis*, but is smaller, and more vaguely marked, and has the secondaries white in both sexes, resembling, in this particular, *mærens*, to which it has a marked habitual resemblance as well. The median shade, vague as it is, is yet sufficiently obvious to require the reference of the species to the *messoria* group of the genus. In this group it is impossible to confound it with anything known to me.

**Carneades collocata** n. sp. (Pl. iii, fig. 5)—Ground color a rather dark fuscous brown, with very fine black powderings. Head concolorous, collar with a broad black transverse line, patagiæ with a black submargin. Primaries with all the transverse markings obsolete, the veins all black marked. A black basal dash, at the end of which is the narrow, loop-like claviform, outlined in black, with a concolorous centre. The cell is black-filled before and around the ordinary spots, which are united, decanter-shaped, inwardly pale annulate, the centre concolorous with the ground. The terminal space is somewhat darker than the remainder of the wing, cut with the paler shade of the s. t. space, most obviously on veins 3 and 4, and 6 and 7. These streaks are not of a character to obscure the reference of the species to the *pitychrous* series of species, but are yet obvious. A lunulate terminal line, followed by a pale line at the base of the fringes. Secondaries in the male white, with a dusky terminal line, in the female with a faint smoky tinge, becoming more marked outwardly. Beneath white, powdery along the costa and outer margin, darker in the primaries. Expands 31-33 mm.; 1.24-1.32 inches.

*Hab.*—Colorado, Bruce, Nos. 321, 481.

This is an ally of *hollemani* and *atristriga*, differing from each of them in the dark, dull and rather even color of the primaries, the costa barely paler in some of the specimens that I have seen, and not at all in others. The secondaries on the contrary are white, in strong contrast to the dusky shade in *hollemani*, and the broadly margined form of *atristriga*. It also bears a resemblance to *insertans*, of the 4-*dentata* series of the genus; but differs from that in the ground color, and in lacking the prominent pale streaks of the series. Male and female are before me, and I am afraid that I have on previous occasions mistaken it for a form of *hollemani* where only one sex was in my hands.

**Carneades audentis** n. sp. (Pl. iii, fig. 9)—Ground color pale whitish luteous, with scattered black powderings. Head dusky in front, with a blackish transverse line. Collar more evidently black powdered inferiorly. Thorax concolorous. Primaries black powdered along the costa, spreading out beyond the t. p. line to the apex, the entire terminal space and a shade preceding the s. t. line also blackish. Basal line geminate, black, distinct. T. a. line geminate, the inner line marked by a few black scales only, the outer line distinct, black, nearly upright, outwardly bent in the submedian and internal interspaces. In the female the basal space has quite a distinct black powdering which is wanting in the male. T. p. line geminate over the costal region only, below which it is single, narrow and crenulated, black. A distinct broad median shade line, oblique from the costa to below the cell, thence near to and parallel with the t. p. line. S. t. line of the ground color, rather broad, and evenly sinuate, relieved by the contrasting dark terminal space, and a narrow black preceding shade. A series of small blackish terminal lunules. Claviform obsolete. Orbicular obsolete. Reniform small, lunate, black. Secondaries whitish, with a small, more or less obvious discal lunule, an extramedian dusky line and a broad dusky marginal band; fringes white. Beneath white, in the male both wings with an incomplete outer line and discal spot, in the female the secondaries immaculate, the primaries with the disc dusky. Expands 34.5 mm.; 1.38 inches.

*Hab.*—Colorado, Bruce, Nos. 56, 360.

This species is at a glance referable to the *messoria* group of the genus, and as readily to the first series of the same, in which the vestiture is hairy only. It differs obviously from the four described species which have the secondaries dusky in both sexes, by the very pale whitish luteous ground color; and more markedly from all its allies here, in the transverse line of the secondaries within the outer marginal band; a character that no other species in this series is possessed of, to my knowledge. There should not be any difficulty in recognizing so well marked a species.

**Carneades titubatis** n. sp. (Pl. iv, fig. 5)—Ground color a very dark red-brown, with a somewhat smoky cast, most evident on the primaries. Head and thorax immaculate, the collar with a slight ferruginous tint. Primaries with the maculation somewhat obscure, yet all traceable. Basal line geminate, the defining lines scarcely darker than the ground color, the included space slightly paler. T. a. line almost upright to the internal vein, thence with a rather long outcurve to the inner margin; obsoletely geminate, only the outer defining line distinct, and that but little darker than the ground color. T. p. line very even, outcurved over the costa, then regularly oblique, more even than the outer margin, with small crenulations on the veins; the line is geminate, the inner defining line distinct, dark brown; the outer blackish, but marked only through the costal region; the included space somewhat paler than the ground color. The s. t. line is very faint, in fact hardly traceable, marked as a rivulous paler shading through the dark outer portion of the wing. A pale line at the base of the fringes. The claviform is moderate in size, outlined with brown scales, else concolorous. Orbicular large, irregularly oblique, outlined with brown and

black scales, within which a few yellowish scales further emphasize it; the centre darker and more dull than the ground color. Reniform large, kidney-shaped, incompletely outlined by black scales, within which is an also incomplete yellowish annulus; the centre darker, but with yellowish scales outwardly. The cell between the ordinary spots is a little darker than the rest of the wing, and there is a very faint indication that a dusky shade line extends through the outer portion of the median space. Secondaries whitish, veins blackish, and an undefined blackish outer border; a pale line at the base of the gray fringes. Beneath, primaries smoky, powdery outwardly and along the costa, an incomplete dusky outer transverse line; secondaries white, powdery gray along the costa, with a broad and rather definite blackish outer marginal band, and a small blackish discal lunule. Expands 35-36 mm.; 1.45-1.50 inches.

*Hab.*—Oregon, Colorado.

Two male specimens of this species are before me at present, one of them from Mr. Graef's, the other from the Hulst collection. I have seen others, collected in Colorado by Mr. Bruce, but have at present no specimens from him. The species is related to *rufula* and *alticola*, but is abundantly distinct from both. It is much darker in the ground color, in which respect it differs most strikingly from *alticola*, which has similar secondaries, while *rufula*, which most resembles it in the ground color, has the secondaries entirely smoky fuscous in both sexes.

***Agrotiphila incognita*** n. sp. (Pl. ii, fig. 9).—Ground color a dull fuscous luteous, intermixed with gray. Collar with a blackish line near tip surmounted by a gray terminal line; patagiæ with a black submarginal line, dorsal vestiture with gray intermixed. Primaries with the basal space inferiorly, and the median space much darker than the other parts of the wing, in which gray predominates. Basal line black marked on costa and in the submedian interspace. T. a. line geminate, inner line fuscous, outer line black, included space gray, upright, with a slight inward angle at middle and an outward loop below the submedian vein. T. p. line geminate, outer line fuscous, inner line black, included space of the pale ground color, very even, almost rigidly parallel with the outer margin after the usual outcurve over the costa. S. t. line gray, distinct, very even, preceded by a series of short, blackish dashes, forming a more prominent costal blotch. A black terminal line; fringes of the pale ground color. Claviform concolorous, distinctly black margined, narrow, loop-like; a yellowish streak extends from its tip to the t. p. line. The cell is darker filled around the ordinary spots which are of the paler ground color, with gray powderings, and are narrowly black ringed. Orbicular small, semi-oval or V-shaped, open to the costa. Reniform moderate, lunate in form. Secondaries dull ochereous on the disc, becoming smoky toward all margins, with a dusky terminal line and paler yellowish fringes. Beneath, a rather pale tawny yellow, with an incomplete blackish outer line and a small discal spot. Abdomen with an admixture of tawny vestiture, becoming more obvious at the tip. Expands 26-30 mm.; 1.04-1.20 inches.

*Hab.*—Laggan, British Columbia, above timber, 7000 feet, July 22, 1890; Aug. 10, 1891, Bean, Nos. 462, 492.

Two male specimens are before me, differing quite markedly in size and also in distinctness of the maculation; otherwise alike. The picture was made from the specimen showing the greater contrast. This species is fully congeneric with *A. rigida*, having like it a well-marked clypeal protuberance and heavily armed fore tibiae. The male antennae have the joints very slightly serrated and laterally bristled.

Though I feel that *rigida* and *incognita* cannot remain associated with the other species of *Agrotiphila*, they yet resemble them so closely that no great injury will be done by refraining from creating a new genus for their reception until additional material enables us to make a more complete study of the specimens. The new species differs obviously from *rigida* in the ground color, in the course of the median lines, and finally in the color of the secondaries.

**Agrotiphila maculate** n. sp. (Pl. ii, fig. 7).—Colors black and whitish gray, contrasting. Head laterally gray with a yellowish tinge, front blackish. Collar gray basally and at tip; patagia gray margined, dorsum with much of the vestiture gray tipped, else black. Primaries with gray as the base, powdered with black and all the markings black. The median space is more densely powdered than the other pale parts of the wing. Basal line broad and distinct, diffuse inwardly, darkening the extreme base of the wing. T. a. line interrupted, broken on the costa, so that the black spot preceding the orbicular appears to be part of it, making the line seem inwardly angulate at the middle. A dusky shade through the basal space along the hind margin. T. p. line outcurved over the cell and slightly incurved below, single, outwardly toothed on the veins, though scarcely lunulate. S. t. line marked by a preceding black shade, forming a distinct, square patch on the costa, and more or less interrupted below. In one specimen it is a continuous broad shade, in the other it is broken into spots; fringes gray. Claviform small, incompletely black margined; cell filled with black before, between and beyond the ordinary spots, which are of the light gray ground color and are not otherwise defined. Orbicular moderate, oval, oblique, open to the costa. Reniform upright, moderate in size, the inner margin straight, the outer somewhat indented at the middle. Secondaries smoky black, the fringes yellowish white. Beneath, whitish, powdery, with a discal lunule, extra median and broken terminal line on all wings. Expands 31–32 mm.; 1.24–1.28 inches.

*Hab.*—Laggan, British Columbia, July 22, 1890, above timber, 7000 feet; Bean, Nos. 461, 493.

Two male specimens in fair condition. The antennae are ciliated, the joints scarcely marked, and the front is smooth. The species, therefore, belong to the typical section of the genus, differing from the other described forms by the blotchy maculation and distinctly anartiform habitus. The two specimens before me differ in the shade



of ground color, and in the dusky shade preceding the s. t. line. In the darker specimen it is complete, in the paler, from which the figure was made, it is broken into spots. The figure, by-the-by, is erroneous, in that the secondaries are much too light. They have a peculiar whitish sheen in the specimen photographed which gives a misleading effect in the negative.

**Mamestra languida** n. sp. (Pl. ii, fig. 6)—Ground color a purplish gray, powdered. Head with an obscure, blackish frontal band. Collar tipped with white scales. Primaries with a dusky shade extending from the base over the costal region and through the cell to the t. p. line, becoming decidedly reddish beyond the reniform. The transverse lines are obscure. Neither the basal or t. a. line is traceable below the costa, on which they are indicated by blackish dots. The t. p. line is geminate, smoky brown, widely outcurved over the reniform and thereafter parallel with the outer margin. The outer component line is the more evident, but neither are prominent. S. t. line yellowish white, obscurely limiting the apical paler patch, then distinct and preceded by a rich velvety black shade to below vein five, forming two long outer teeth on veins three and four, then again preceded by a similar black shade to the inner margin. A series of black interspaceal dots preceding a pale line at base of fringes; the latter cut with whitish opposite the venules. The claviform is very small, faintly black margined. Ordinary spots large, rather paler than ground color. Orbicular round, narrowly brown ringed. Reniform wide, brown ringed, the brown enriched by black scales; a yellowish line outwardly and a paler gray central lunule. Secondaries white, fuscous powdered, darkening outwardly to smoky. A smoky terminal line; fringe whitish. Beneath white, black powdered, primaries smoky on disc. Expands 37.5 mm.; 1.50 inches.

*Hab.*—Colorado, Bruce; No. 261.

A single male only, and a miniature copy of our eastern *purpurissata*. The antennal characters as to proportion and serration are alike, the short thorax and unusually long abdomen are the same, and the ornamentation is very similar. There are, however, some differences in detail. The t. a. line is fairly evident in the larger species, and the t. p. line is lunulate, not even as in the new species. The dusky shade through the cell and over costal margin is also distinctive, and finally the whitish secondaries furnish a convenient and obvious distinctive character outside of the small size.

I would not be surprised if more abundant material proved my *M. juncimacula* a good species rather than a variety of *purpurissata*, as which I have referred it.

**Mamestra fuscolutea** n. sp. (Pl. i, row 1, fig. 3)—Of a dull, somewhat fuscous, powdery clay yellow, resembling some forms of *trifolii* in this respect. Head and thorax concolorous. Collar with a vague blackish transverse line medially and near tip; patagiæ with a submarginal blackish line. Primaries with all the markings traceable, but not well defined; the median lines broken. Basal

line geminate, black, included space concolorous, marked only on the costa and submedian interspace. T. a. line geminate, black, interrupted, inner defining line vague, outwardly oblique and outcurved in the interspace, so that it reaches the hind margin at about its middle. T. p. line geminate, the inner line blackish and lunulate, interrupted on the veins, the outer line fuscous, indefinite. A vague median shade line, black-marked on the costa, but scarcely traceable elsewhere until it reaches the inner margin. The s. t. space is rather paler than the rest of the wing, and the s. t. line is prominent, pale, marked with whitish scales preceded by large, blackish fuscous sagittate spots. The line is rather even, save that it is variably indented on veins 3 and 4 by whitish rays on these veins. There are less marked whitish rays on veins 7 and 8 as well, which do not indent the line. There is a series of black terminal lunules preceding a pale terminal line. The fringes are paler than the ground color, with a fuscous interline and cut with fuscous at their tips. The claviform is black-marked, concolorous, variable in size. Orbicular irregularly oval, variable in size, black ringed, then annulate with whitish, centre of the ground color. Reniform irregular, outwardly expanded inferiorly, black margined, then annulate with white, centrally filled by a black powdering, much more prominent inferiorly. Secondaries dull luteous, more whitish and partly transparent basally, more fuscous outwardly. Fringes paler, with a darker interline. Discal lunule visible. Beneath paler, more whitish, fuscous powdered, both pairs of wings with an outer line and a discal lunule, the primaries, in addition, a dusky s. t. line. Expands 35-40 m.; 1.60 inches.

*Hab.*—Colorado, Bruce; Nos. 284, 291, 380.

One male and two female specimens are before me, from the smaller of which the figure was made. There is another among the material for determination in the collection of the American Entomological Society. The species cannot be positively referred to its proper group in the genus until the genitalia of the male have been examined, but it has the habitus of *chartaria* or *defessa*. The sagittate subterminal marks give the insects a marked resemblance to *Hadena devastatrix*, not in any way lessened by the rather prominently whitish marked reniform.

**Mamestra hadeniformis** n. sp. (Pl. v, fig. 4)—Ground color a pale sordid luteous gray, with black powderings. Collar with an undefined broad luteous band. Thoracic vestiture with black scales intermixed, forming an indefinite marginal line. The dorsal tufts are small but evident, divided. Primaries with a deeper ashen gray shade along the inner margin, and through the terminal space, the transverse maculation indistinct. Basal line geminate, darker gray, with somewhat paler included space, angulated on the median vein, very little relieved. T. a. line geminate, defining lines scarcely darker, included space of ground color outcurved in the interspaces, with difficulty traceable. T. p. line geminate on costa and inner margin, between which points the outer line is obsolete, the inner only feebly defined, darker gray, accompanied by a narrow white line, crenulated, irregularly bisinuate. A somewhat diffuse median shade, darkening the reniform and close to the t. p. line below it. S. t. line distinct,

white, outwardly angulated below the apex, and outwardly dentate on veins 3 and 4, forming a distinct though not prominent **W**. A series of small, black terminal lunules, followed by a pale line at base of fringes. The latter of dull luteous fuscous, with a darker interline, and cut with gray opposite the veins. Claviform concolorous, incompletely black margined, short and rather wide. Ordinary spots large, vaguely defined by a few darker scales, and a slightly paler gray annulus. The reniform somewhat darker filled. Secondaries soiled white, with a broad smoky outer margin, smoky veins darker in the female, and white fringes; the latter with dusky interline. Beneath whitish powdery, both pairs of wings with a more or less evident discal spot and outer broken line. Expands 32 mm.; 1.28 inches.

*Hab.*—Colorado.

Two specimens ♂ and ♀, both collected by Mr. Bruce, the ♂ from Mr. Neumoege's collection, the ♀ with Mr. Bruce's No. 365.

The species has a decided resemblance to some forms of *Hadena characta* in wing form and ground color, so that it might be easily confused with it at first sight. It belongs with the *w-album* group of the genus, and in color resembles *trifolii*, but with much narrower, more elongate wings. The maculation is obscure, and more so in the ♀ than in the ♂.

**Mamestra segregata** n. sp. (Pl. ii, fig. 11)—Very dark purplish brown, verging on blackish; a more reddish shade through the centre of the primaries, the lighter regions relieved by gray powderings. Collar with a black above a gray transverse line in the male, which in the female is scarcely traceable. Primaries with the transverse lines all present. Basal line geminate, gray filled, the defining lines vague, except in the submedian interspace, where the inner line is prominently black. T. a. line geminate, gray filled, narrow, the inner line concolorous and not well marked, the outer black, slightly outcurved in the interspaces and rather evenly outcurved as a whole. T. p. line geminate, narrowly gray filled, the defining lines marked by slightly darker scales to vein 4, below which the outer line gradually disappears and the inner line become better marked. As a whole the line is even, outcurved over the reniform and distinctly incurved below. S. t. line yellowish, narrow, relieved by darker brown or black powderings on either side. Claviform small, distinctly margined, the apex of the defining lines continued across the median space to the t. p. line. Orbicular large, gray, oval or oblong, oblique, in the male complete, in the female open to the costa, defining lines composed of black scales. Reniform large, gray powdered, upright, slightly dilated inferiorly, defined by a narrow, incomplete black line, inwardly edged by pale scales. Fringes concolorous slightly dentate over the veins. Secondaries deep smoky brown, glistening, with a blackish terminal line and somewhat paler fringes. Beneath, primaries smoky, paler powdered along the costa. Secondaries carneous gray, with blackish powderings, a dusky median shade line and a discal lunule. Expands 36 mm.; 1.43 inches.

*Hab.*—Laggan, British Columbia, at light, May 13, 17, Bean; Nos. 447, 531.

A good pair is before me. They are robust, the thoracic vestiture

somewhat loose, divergent, forming low, divided anterior and posterior tufts; the clothing of breast and legs loose, woolly. There is a series of dorsal tufts on the abdomen, larger at base and more prominent in the male. The head is somewhat retracted, the palpi short, the antennæ in the male ciliated. The joints are slightly marked and the ciliations are grouped, without forming distinct tufts. The species is scarcely referable with propriety to any of the groups of my paper, coming most near to that of which *latex* is the type. At first sight *subjuncta* is suggested; but the even s. t. line forbids its reference to that series. This combination, very dark brown color, connected median lines, even s. t. line and broad wings, should make the species recognizable.

**Scotogramma luteola** n. sp. (Pl. ii, fig. 10)—Ashen gray, varying to luteous or fuscous, more or less black powdered. Basal line wanting. T. a. line obsoletely geminate, the inner line of ground color, outer line varying from brown to black, included space slightly paler, the outer line with more or less obvious teeth on the veins, its course, as a whole, rather evenly outcurved. T. p. line single, brown to blackish, more or less evidently denticulated on the veins, its course outwardly over the cell and thence with a deep incurve below, greatly narrowing the median space inferiorly. S. t. line sinuate, marked only by a blackish preceding shade which merges into the ground color before the t. p. line, and is twice interrupted, more or less obviously, opposite the cell and in the submedian interspace. A dusky terminal line. Fringes dusky, with a yellowish interline and cut with yellowish on the veins. A diffuse, dusky, median shade darkening the cell centrally and the median space inferiorly. Claviform wanting. Ordinary spots barely indicated, not sufficiently defined to be described. Secondaries smoky to blackish, with whitish or yellowish fringes. Beneath, varying in shade from whitish to yellowish, black powdered, with a broad diffuse outer band on all wings; secondaries with a more or less obvious discal spot. Expands 28–30 mm.; 1.12–1.20 inches.

*Hab.*—Laggan, British Columbia, 6700 feet, July and August; Bean, Nos. 463, 495, 496.

The three male specimens before me differ quite considerably in ground color, though the markings are identical in most respects. There is a difference in the amount of contrast and also in the distinctness of the denticulation of the t. p. line. Mr. Bean informs me that the gray forms are normal and that the others are exceptional.

The species has hairy vestiture and finds its nearest ally among the described forms, in *phoca* Moeschl., differing obviously, however, in color and in maculation. It seems rather curious that all the specimens sent me by Mr. Bean are males, while heretofore I have had females almost exclusively, of the species in this genus.

**Scotogramma uniformis** n. sp. (Pl. ii, fig. 12)—Ground color a dull grayish luteous, with an even and rather dense powdering of black hair and scales. Head and thorax immaculate. Primaries with vague traces of the ordinary markings in the form of dusky cloudings not sufficiently definite to describe. The fringes are somewhat paler. Secondaries smoky, with a yellow tinge on disc, in which a dusky lunule may be traced. Fringes pale straw yellow. Beneath whitish powdery, with a discal lunule and a broad blackish outer margin on all wings. Primaries with the disc dusky; secondaries with quite contrastingly pale fringes. Expands 33 mm.: 1 3/4 inches.

*Hab.*—Laggan, British Columbia, July 31, 1891, far above timber (7000 feet); Bean, No. 465.

A single male in very good condition is before me, though Mr. Bean has others. The species belongs in that section of the genus in which the vestiture is hairy, and is readily separated from them all by the lack of any distinct maculation. The vestiture is loose and fluffy on the dorsum and on the ventral side, and the primaries are quite broad, giving the insect a short winged appearance.

**Hadena didonea** n. sp. (Pl. vi, fig. 7)—Ground color a somewhat luteous brown. Head concolorous, or somewhat smoky. Collar with a black transverse line, above which are some gray scales, giving it a gray appearance, more marked in the female. Primaries more or less powdered with white and black scales, so massed as to cause a gray shade over the costa and along the internal margin. T. a. line geminate, defining lines narrow and partly obsolete, included space whitish gray, also more or less incomplete. In course the line is somewhat oblique outwardly, and is outcurved in the interspaces, outwardly dentate below vein 1. T. p. line geminate, very even, widely outcurved over the cell, and evenly oblique below. The defining lines are blackish gray, the included space paler, except below vein 2, whence it is prominently white to the inner margin. A distinct black bar through the submedian interspace connects the median lines. S. t. line incomplete in the upper part of its course; from the costa to between veins 5 and 6 marked by the contrast between the blackish gray terminal space and the ground color; between this point and vein 3 the ground color extends to the outer margin, and below this the line is distinct and white, making an inward curve so as to leave the terminal space over the anal angle dusky. A pale terminal line preceded by black interspaceal dots. Fringes of the ground color cut with blackish and with a narrow, pale interline. Orbicular oblong, oblique, very badly defined, and not easily traceable in some specimens. Reniform well sized, upright, somewhat constricted medially, incompletely pale ringed and gray centered. Secondaries an even smoky fuscous, with a darker terminal line and paler fringes. Beneath luteous fuscous, powdery, in the female with a discal spot on the secondaries. Expands 30.5–33.5 mm.; 1.22–1.34 inches.

*Hab.*—Colorado; Bruce, Nos. 260 and 485; Glenwood Springs, Colorado, in August; Barnes, Nos. 363 and 364.

Two males and two females are before me, all in fair condition. The species very much resembles *indirecta* Grote in color and maculation; but is much lighter, and the abdomen is scarcely tufted even

in the male. The male antennæ are finely ciliated. The anal angle of the primaries is somewhat retracted, the outer margin thereby slightly angulated on vein 3.

### NEURONIA Hüb.

Moderate, plump species, related to *Charæas* Steph., but differing by the short, densely clothed thorax, which has both anterior and posterior tufts; by the short, membranous tongue; the stout, more or less pectinated male antennæ, and the short male lateral pieces (harpes) which do not have the inner angle produced hook-like. The eyes are hairy.

The larvæ are plump, cylindrical, shining, with corneous prothoracic and anal shields; dark brown in color, with narrow, yellowish, flesh-colored lateral lines. They feed in May on grass sprouts and roots and pupate in the earth.

The above characterization is a free translation from Lederer, and with it agrees a species now before me. It may be added that the primaries are broad, rather short, trigonate, with a marked, rounded apex and oblique outer margin.

The occurrence of this European genus in our fauna is interesting. It is not a widely distributed one, the species are not numerous, and it is rather aberrant than ordinary in the combination of structural characters. Such genera are rarely represented in widely separated localities, and the question of their origin always gives food for speculation.

**Neuronia americana** n. sp. (Pl. iii, fig. 3).—Ground color a somewhat sordid luteous gray, with black powderings. Head darker, even in color. Collar yellowish inferiorly, above gray, white tipped. Patagiæ centrally white, limited by a black submarginal line, margin ash gray. Disc of thorax luteous gray or fuscous anteriorly, ashen gray posteriorly, the tuftings inconspicuous. Primaries with all the veins prominently white marked, except through the s. t. space, where they are black. Basal line incomplete, geminate, the defining line blackish, narrow, included space paler, more luteous; the line marked only on the costa and through the submedian interspace. T. a. line geminate, incomplete, marked on the costa by dots, in the submedian interspace by an outercurve, and below the internal vein by an outward angle; the outer defining line is black, the inner not contrasting, included space paler luteous and white powdered. T. p. line geminate, the inner line black, feebly lunulate, the outer scarcely darker, even, included space paler; in course the line bends sharply outward on the costa and thence runs very evenly oblique, almost parallel with the outer margin to its termination on the inner margin. S. t. line white, only a little irregular, except that it is feebly dentated on veins 3 and 4; preceded by a well-marked dusky shade, in which black sagittate spots further emphasize the line. A black

terminal line, cut by the white veins. Fringes cut with white beyond the veins. A black line extends below the subcostal from the base to the orbicular. The latter is small, irregular, almost round, and incompletely outlined. Reniform large, incompletely outlined, nearly concolorous. Claviform large, well defined, extending nearly to the t. p. line, with distinct black outlines. Secondaries soiled whitish, the veins dusky marked, a dusky submarginal band and a small discal lunule. Beneath whitish, powdery, the primaries darker, both wings with an outer line and a discal lunule. Expands 31 mm.: 1.25 inches.

*Hab.*—Boulder, Mont.

Male and female are in the collection of Mr. A. Schoenborn, at Washington, received from Mr. Titus Ulke.

The antennæ in the male are quite lengthily pectinated, resembling thus *popularis* rather than *cespitis*.

### PLATYPERIGA n. gen.

Head rather small, distinct; eyes large, naked, without lashes; front flat, smooth; palpi moderate, terminal joint either small or of moderate size; tongue long, corneous; antennæ in the male simple or ciliated, in the female simple. Thorax small, rounded, vestiture scaly, smooth, forming a small, inconspicuous basal tuft; legs rather slender, unarmed, posterior much longer, with scaly clothing. Abdomen long, slender, untufted or with small scale tufts on the basal segments. Wings large, primaries trigonate, costa somewhat arched, apices rectangular or a little produced; secondaries proportionate; venation normal, vein 5 of secondaries weak.

This generic term is proposed for three species which, with the essential characters of *Perigia*, combine a much slighter body and proportionately large wings. They have a scaly vestiture, different in character from that of the Byrophilid series, and the habitus is Hadeniform, rather than otherwise.

The type of the genus is *P. camina*, in which the wings are broadest, the costa arched, the male antennæ quite densely ciliated, and the terminal joint of the palpi is very short. In *discistriga* the wings are narrower, the costa is not arched, the male antennæ are simple, and the terminal joint of the palpi is moderate in length.

**Platyperigea camina** n. sp. (Pl. vi, fig. 9).—Head, thorax and primaries immaculate; primaries with all the normal maculation obscure, the t. p. line only barely traceable as a faint pale shade. In the median cell a black dash represents the orbicular and a somewhat lunate, and entirely indefinite black spot represents the reniform. There is a series of obscurely marked terminal lunules, and the fringes have an obscurely pale interline. Secondaries soiled white, outwardly powdery, the veins smoky; a series of well marked terminal

lunules, sometimes united into a terminal line. The discal spot of the under-side is visible through the thin wing tissue. Beneath whitish, powdery, darker outwardly and along the costa; secondaries with a rather large and prominent discal spot. Expands 32.5–33.5 mm.; 1.30–1.34 inches.

*Hab.*—Colorado; Bruce, Nos. 27, 204.

This species is very simply marked and easily recognized. Both sexes are represented in the three specimens that are now before me, and both sexes are also in other collections in which I have given the MS. name here used.

***Platyperigea discistriga*** n. sp. (Pl. vi, fig. 10)—Ground color a rather bright luteous, overlaid with black and white scales, which, massed in spots, form the ornamentation of the species. Head and thorax so densely clothed with these scales that it appears ashen gray, forming no distinct markings. On the primaries the veins are all more or less marked with gray, a gray shade extends along the inner margin, most obvious in the male; another extends over the median vein, gradually broadening, until at the outer margin only the apex and the anal angle are not involved. The costa also, is narrowly gray. In the female the median gray shade is broken beyond the t. p. line, and the ground color appears. The transverse maculation is mostly obsolete, the t. p. line indicated in some specimens by venular black, followed by white dots, and the s. t. line very obscurely indicated by paler shadings. The fringes are gray, cut with white on the veins. Orbicular small, decumbent, gray, outlined with luteous; reniform narrow, upright white, with dark centre. Secondaries whitish, outwardly powdery, with a narrow dark terminal line. Beneath white, powdery, most obviously so toward the costa, each wing with a discal spot, most distinct on the secondaries. Expands 33–36 mm.; 1.32–1.45 inches.

*Hab.*—Colorado; Bruce, No. 456; Glenwood, Colorado, August, Barnes, No. 291.

Both sexes are represented in the specimens before me, and I have seen others in collections from the same State. The species is entirely different in appearance from the preceding, and yet resembles it in all essential structural characters. The luteous ground color, with the prominent gray shade through the middle will render the species recognizable I think.

***Platyperigea praeacuta*** n. sp. (Pl. iii, fig. 6)—Ground color dark ashen gray, powdered with black scales, the appearance varying according to the amount of black in the mixture. Head and thorax concolorous, the basal tuft black inferiorly. Primaries with the median lines single, black, forming the most prominent feature of the wings. The basal line is single, black, distinct, acutely angulated outwardly in the cell. T. a. line a very broad, evenly outcurved fascia, which is a little emphasized by paler scales on either side. T. p. line with small, irregular dentations, evenly outcurved over the reniform, somewhat incurved below. S. t. line an obscure whitish shade, defined in the costal region by a dark shade in the subterminal space, which dark shade reappears distinctly in the submedian interspace; but is fragmentary between. A series



of distinct, blackish terminal lunules. Fringes dusky, with a pale line at base. Claviform wanting. Orbicular moderate in size, oblique, oval, defined by darker scales, a little paler filled. Reniform rather large, kidney-shaped, defined by black scales, somewhat gray filled. Secondaries powdery, blackish, with a black terminal line and paler fringes. Beneath gray, powdery, both wings with an incomplete outer line, and a black discal spot. Expands 32-33 mm.; 1.28-1.32 inches.

*Hab.*—Colorado; Bruce, No. 11; Glenwood, Colo., September, Barnes, No. 32.

Two female specimens are before me, both of them in fair condition. The distinct and prominently contrasting median lines mark this species at sight. It bears a distant resemblance to that series of *Hadena*, of which *leucoscelis* and *hillii* are typical; but lacks all trace of the abdominal tuftings. From the other species referred to the present genus, it is abundantly distinct. I have had this species in my possession for over three years, awaiting relatives before describing it; and such as I have now found are not very close.

***Perigea veterata*** n. sp. (Pl. iii, fig. 7).—Ground color a very pale whitish luteous. Head and thorax concolorous, immaculate, palpi laterally dusky. Primaries powdered with black scales, which become so numerous beyond the t. p. line that the wing there is blackish. All the maculation is diffuse and obscure; but all of it is at least traceable. Basal line single, blackish, broken. T. a. line blackish, very oblique, irregular. T. p. line narrow, black, crenulated, moderately outcurved over the cell, a little incurved below; single, except that the outer part of the defining line is indicated toward the costa by the dark s. t. space. S. t. line of the ground color, irregular, appearing broken and rivulous through the dark outer part of the wing. A series of more or less distinct blackish terminal lunules. A more or less obvious median line is outwardly oblique from the costa, darkening and obscuring the reniform, thence near to and parallel with the t. p. line, petering out toward the inner margin. Claviform not traceable in the specimen before me. Orbicular round, vague, indefinite, concolorous, traceable only by a few blackish scales. Reniform better defined, upright, blackish, narrow, somewhat lunate in shape. Secondaries white in both sexes, veins dark marked, and a vague, dusky, outer marginal shade. Beneath, primaries with a creamy tint, more or less powdery along the costa, an incomplete outer line and a vague discal lunule. Secondaries white, with a series of outer dusky lunules, and a more or less distinct discal spot. Expands 36-39 mm.; 1.44-1.56 inches.

*Hab.*—Glenwood Springs, Colo., September and October; Barnes, Nos. 445, 446, 447.

Three specimens, representing both sexes are before me, none of them perfect, but all of them in at least fair condition. The species is unlike any other of the genus that is known to me, and belongs to the series containing the large winged forms like *albolabes*, which this species most nearly resembles in habitus, while totally distinct in color.

**Hyppa indistincta** n. sp. (Pl. iv, fig. 4).—This species can be best described by comparing it with the common *xylinoides*, which it resembles in the general style of the markings and in color. In the new species the ground color is paler throughout, the gray much more even. The t. a. line is almost obsolete, and marked only as a curved line though the costal region. The short, black, basal streak in *xylinoides* is here replaced by a broad streak, which is continuous through the median space to the t. p. line. The latter is more even than in its ally, and is much less distinct. The s. t. line lacks all the powdery appearance, and has a mere indication of the prominent W-mark of the usual form. The ordinary spots are scarcely defined, but as much as can be made out, resembles those of *xylinoides*. Finally, the tufting of the dorsum of the abdomen is less prominent in the new species. Expands as in *xylinoides*.

*Hab.*—Mount Hood, Graef.

The single male specimen has been considerable of a puzzle to me. I have tried to make it out a variety of the common species, and have compared it with numerous western specimens, without at any time finding one like it, or near enough to it, to make it of use as an intergrade. Yet I will not be at all surprised if in the future this proves a local form, the name then representing a very distinct variety. I have held the specimen nearly a year hoping to get others like it.

**Oncocnemis pudorata** n. sp. (Pl. ii, fig. 8).—Head, thorax and primaries a dull, olivaceous powdery fuscous gray, with an admixture of black and white scales. Head and thorax immaculate. The primaries have the normal markings traceable, but all indefinite, interrupted and pulverulent. The half line is blackish, apparently single. T. a. line obsoletely geminate, the outer line only distinct, blackish, outwardly oblique in general course, rather evenly outcurved between the veins. T. p. line obsoletely geminate, the outer part of line indefinite, the inner outwardly denticulate on the veins. A white shade follows the t. p. line, darkening rapidly until, at the s. t. line, it forms an irregular blackish shade, which, by its greater or less contrast with the terminal space, defines the s. t. line. A blackish, interrupted terminal line. A dull yellowish line at base of fringes, which have also an interline of the same color. There is an almost upright, broad, diffuse dark shade through the median space. The claviform is vague, concolorous, defined only by a few darker scales. Orbicular round, or nearly so, slightly paler, with concolorous centre, and no very obvious defining line. Reniform yet more vaguely defined, slightly paler, centred with concolorous, broad, upright. Secondaries black, with a broad white median band, at the margin of which the black discal spot is partly visible, and through which the veins are marked with blackish. Fringes white, with a fuscous interline. Beneath, white with a broad black outer margin, a discal spot and a more or less dense black powdering at the base. Expands 28–29 mm.; 1.12–1.16 inches.

*Hab.*—Laggon, B. C., Agnes Lake, 6700 feet, Aug. 19, 1891, Thomas E. Bean, Nos. 458, 491.

Two specimens, male and female are before me, and I understand that Mr. Bean has others. The species belongs to the *fasciatus* group,

though the secondaries are rather white than black banded. It finds its nearest ally in *tenuifascia*, which is, however, much smaller, and in other respects quite different. From *fasciatus* it differs in that the white band of the primaries is not nearly so prominent, nor is the insect so well marked in any respects. In the pair before me the female is paler and a trifle better marked than the male, and from it the figure was made.

***Oncocnemis exemplaris*** n. sp. (Pl. vi, fig. 8).—Ground color dark ashen gray, made up of a mixture of black and white scales. Head more blackish in front, collar with a black median line, patagiæ with black submargins. Primaries mottled, the maculation obscure, yet all the normal markings traceable. Basal line single, black, preceded by a white shade. T. a. line broad, black, followed by a white shade, both indefinite, diffuse, outwardly oblique, outcurved between the veins. T. p. line geminate, the outer line marked only on the costa and toward the inner margin: the inner line distinct, narrow, black, even, gently outcurved over the reniform and somewhat incurved below. A very evident white line accompanies that last described. S. t. line very irregular, marked by white scales, but chiefly defined by a blackish subterminal shade, in which are a few more or less evident sagittate black dashes. Except at the apex, the irregular terminal space is somewhat lighter than the rest of the wing. A series of black terminal lunules at the base of the long fringes, which are blackish, narrowly cut with white. There is a very indefinite and diffuse median shade line. The claviform is vaguely traceable, more by the centering of white scales than by any defining line. Orbicular small, round, annulate with white, centered with blackish. Reniform narrow, upright, black and white marked, followed by a prominent white shade which extends to the t. p. line, and even lightens the s. t. space for a short distance beyond it. Secondaries black, with a broad median white shade, in which is a black discal lunule, the fringes white. Beneath, all the wings black at base, the median space broadly white; on the primaries a black band follows, the outer margin being white and blotchy; on the secondaries the black band extends to the outer margin, the fringes being white. Expands 25 mm.; 1 inch.

*Hab.*—Yosemite, Cala.

A single male specimen only is before me, not in the best condition; but with all the markings distinct. It is a very close ally of *pudorata*, but is smaller, of a clear gray, the t. p. line even instead of crenulated, and the diffuse whitish band is replaced by a prominent white blotch beyond the reniform. There should be no great difficulty in identifying this species.

***Oncocnemis umbrifascia*** n. sp.—Head and thorax umber-brown, palpi paler beneath. Thorax a faintly reddish ash-gray, with brown powderings. Primaries with basal space gray, powdered with brown; median space dark umber-brown. S. t. space gray at the t. p. line, brown powdered, the brown gradually replacing the gray, so that the terminal portion of the wing is umber-brown; but more powdery and not so deep, and as even as in the median space.

Fringes brown with a faint line at base. T. a. line white, marking the anterior margin of the dark median space, outwardly angulated in the cell and reaching the orbicular, which is oval, elongate and pale powdered. T. p. line white, forming the outer or posterior margin of the dark median space; strongly and somewhat acutely exerted over the cell and almost rigidly oblique below. The reniform is upright, narrow, annulate with gray, slightly paler in shade. S. t. line wanting. Secondaries yellowish fuscous, with the outer margin darker, more smoky and the fringe paler. Beneath rather gray, finely powdered, immaculate; secondaries rather paler, the powderings coarser. Expands 28 mm.; 1.12 inches.

*Hub.*—Colorado (Bruce); N. W. British Columbia, Neumoegen.

Two specimens have been examined, one of them in Mr. Neumoegen's collection, the other from Mr. Bruce, now in the U. S. National Museum. The species is a very distinct one, and is allied to *atrifasciata* Morrison. It has a resemblance in color and ornamentation to *Plusia parilis*, and should be easily recognizable.

***Oncocnemis resecta*** n. sp. (Pl. vi, fig. 11)—Ground color a pale mouse-gray, powdery. Head with front paler, a deep chestnut-brown line between the antennæ, else concolorous. Thorax concolorous, immaculate. Primaries uniform in color to the subterminal space, beyond which it darkens to a deeper brown, extending to the outer margin, and involving also the fringes. Basal half line single, not extended beyond the costal region. T. a. line simple, broad, distinct, black, slightly outcurved, even. T. p. line simple, black, evenly outcurved over the reniform, thence slightly irregular to the hind margin. The s. t. line is not traceable through the dark terminal space. A series of dark terminal lunules. Secondaries white at base, with a broad black outer margin, fairly well defined inwardly, the veins dusky. Beneath both wings whitish, with a blackish outer margin, powdery. Expands 31 mm.; 1.24 inches.

*Hab.*—Colorado; Bruce, No. 483.

A single male specimen only is before me, and I believe that Mr. Bruce took no others. The species is very simply marked, and should be easily recognized. It has a decided resemblance to the species of *Homohadena* at first sight, from the simple transverse lines, and it has no very close allies in the genus to which I have referred it, though it has all the characters of a typical *Oncocnemis*. It is best referred to the section *homogena*, though it has some resemblance to *terminalis*. There is no trace of the ordinary spots in the specimen before me; but I would not be surprised if they proved visible in other specimens when a larger material is at hand.

While this specimen has not any relative among the described species, it is certain that there are others as yet undescribed that will at some time in the future keep it company. I have a very poor specimen from the Colorado desert, given me by the late Henry

Edwards, which resembles *refecta* very closely, but is distinct. It is altogether too poor to describe, and will keep until better material is at hand.

***Oncocnemis viriditincta*** n. sp. (Pl. vi, fig. 12)—Ground color dull luteous, with a distinct olivaceous tinge. Head darker, smoky. Collar with a strong admixture of black and white scales, forming a whitish tip. Disc of thorax also powdered with white scales, though much less prominently so. Primaries rather even in color, all the normal maculation traceable, though not prominent. Basal line simple, black, distinct. T. a. line black, distinct, a little oblique outwardly, and somewhat irregular, preceded by a few white scales. T. p. line crenulated, blackish, with a rather even outcurve, followed by an indefinite pale shade. S. t. line very irregular, marked by white scales, which are preceded by a few blackish scales; interrupted, except toward the apex. A series of small blackish lunules at the base of the fringes. The latter are pale, cut with dusky, and there is a dusky line at the base. There is a somewhat faint and irregular median line touching the reniform in its course. Claviform very small, defined by black and centered by white scales. Orbicular white, contrasting, defined by black scales, round. Reniform rather small, lunate, white, centered by the ground color. On the costa there is a series of white dots marking the inception of all the transverse lines. Secondaries smoky brown, with a blackish extra median line, and a broad but not contrasting blackish outer margin. Fringes white, with a dusky line at the base. Beneath, primaries smoky, powdery toward the costa. Secondaries powdery gray, with a dusky extra-median line and a blackish outer margin. Expands 30 mm.; 1.20 inches.

*Hab.*—McLean, British Columbia; Bean, No. 3676.

A single specimen only of this very distinct species is at hand, and according to Mr. Bean no others were taken. The example is a female in good condition, and has a resemblance to the *variolata* group of the genus *Mamestra*. It has no very close allies in the genus to which I have referred it, and therefore finds a place in the group *homogena*, to which all such species are assigned. The olive tinged primaries, and the contrasting white ordinary spots will serve to distinguish the species, once the genus is recognized.

Since the above was sent to the printer I have received a specimen from Mr. J. Alston Moffat, who informs me that he captured altogether four specimens near Hamilton, Ontario, many years ago, late in Summer, on golden-rod. His specimens had lost nearly all trace of the mossy-green appearance.

***Oncocnemis colorado*** n. sp. (Pl. ii, fig. 5)—Head, thorax and primaries a bluish ashen gray. Head with a blackish fuscous transverse band on front and an admixture of scales of the same color on the vertex. Collar with a blackish band at base and a narrow fuscous band near tip. Thoracic disc with black scales intermixed. Primaries sparsely powdered with black and fuscous scales, an indefinite fuscous shade extending through the centre of the wing. T. a. line

marked only by an oblique fuscous streak over the costal region. T. p. line traceable for its entire length, single, fuscous, outwardly oblique from costa, forming nearly a right angle over the cell and inwardly evenly oblique to the hind margin, less distinct at this part of its course. The s. t. line is only incompletely marked by the interruption of a series of interspaceal black marks, which, in the fuscous central region, are very incompletely relieved by gray scales. A pale, followed by a dusky terminal line. A black streak at base, at the end of which is the small loop-like claviform, which nearly touches the t. p. line. The ordinary spots are fused, narrowly black and white ringed, the centre fuscous. Secondaries dirty white at base, with a smoky outer margin and all the veins smoky. Beneath, primaries smoky, relieved by a whitish powdery shade beyond the middle, through which is a dusky transverse line, distinct only a short distance from costa. Secondaries white, powdered with fuscous over the costal region, a more distinct smoky outer band not reaching the anal angle, a punctiform extra-median line and a small, blackish, discal lunule. Expands 34 mm.; 1.36 inches.

*Hab.*—Park County, Colo., Bruce.

This species closely resembles *chandleri* at first sight, and so I regarded it for some time, until abundant material of each proved their distinctness. The new species is less definitely marked, has an even t. p. line, and the series of sagittate marks preceding the s. t. line is very different. Finally, the sexual characters of the male do not at all resemble those of *chandleri*, but are very close to those of *O. augustus* figured by me on Pl. VIII, fig. 7, Trans. Am. Ent. Soc. xvi (1889). Several specimens are in collections; type in coll. U. S. National Museum, Rutgers College and Neumoegen.

***Oncocnemis nigrocaput*** n. sp. (Pl. i, first row, fig. 4).—Head blackish brown, palpi whitish. Thorax and general color of primaries a dull, slightly yellowish ashen gray. Collar at base with a faint reddish tinge, this shade limited by a narrow, black, transverse line. Primaries without transverse lines, black powdered, all the veins marked with black scales, and a series of small interspaceal black dashes at outer margin. A black dash from base through the submedian interspace, nearly to the middle of the wing; another, beginning in the middle of the cell and extending through and beyond it to the outer margin, sometimes interrupted on the reniform. A pale line at the base of the concolorous fringe. Secondaries white, veins marked with fuscous, and a fuscous line at base of fringes. Beneath whitish, powdery, the primaries more densely so; all wings with a discal spot. Expands 32 mm.; 1.28 inches.

*Hab.*—Colorado, Bruce.

This species belongs to the group *atricollaris*, and seems, from the description, to be allied to *griseicollis* Grt., which is unknown to me; but which can scarcely be the present form since it is said to have the median lines marked and is not said to have a basal dash.

Two specimens, ♂ and ♀ numbered 296 and 181, respectively, collected by Mr. Bruce, are before me, and are the types.

***Oncoenemis extranea*** n. sp. (Pl. i, second row, fig. 4)—Gray, with a fuscous admixture. Head brown. Collar with a black line at base, and a more brownish one near tip. Primaries powdered with fuscous, this powdering becoming more dense outwardly, until in the terminal region the wing is dark fuscous; this dark space crossed by black interspaceal marks. The median lines are very vaguely traceable, but scarcely describable. A dark, slender, terminal line. Fringes pale, cut with fuscous. A black dash at base in the submedian interspace, at the end of which is the concolorous claviform, outlined in fuscous and with a fuscous centre. The ordinary spots are fused into a slender, elongate macula, somewhat enlarged outwardly and black filled. Secondaries fuscous, much paler basally and with whitish fringes. There is an evident discal dot, and the darker outer region is fairly defined. Beneath, whitish powdery, with a rather broad dusky outer margin and a distinct discal dot on all wings. Expands 31 mm.: 1.25 inches.

*Hab.*—Colorado, Bruce.

A single good male specimen is before me. The species belongs to the *atricollaris* group, and resembles somewhat the preceding at first sight, differing markedly, however, on a more careful examination. The dusky secondaries will separate the present form at a glance. It has a casual resemblance to *Carneades hollemani*.

#### **CEROPODA** n. gen.

Eyes naked, hemispherical, large. Palpi rather small, scarcely exceeding the front. Tongue long and strong. Vestiture of front rather even, forming an obtusely truncated tuft between the antennæ. The latter in the female are simple, in the male have the joints moniliform or somewhat bead-like, laterally furnished with tufts of rather stiff hair. Front smooth. Thorax moderate, convex, vestiture mixed hair and scales, forming a very feeble anterior crest and a very little better marked posterior tuft. Legs moderate, clothed with long and rather thin vestiture. Tibiæ not spinulated, the anterior furnished at tip with an outwardly curved, divergent spine or claw; the first tarsal joint has one such claw at middle, and another at tip; the second tarsal joint has one such at tip, and the third and fourth joints have each a smaller, straight divergent spine at tip. Wings rather large, primaries widening rather regularly from base, apex pointed, outer margin quite oblique. Secondaries proportionate; vein 5 weaker than the others and from the cross-vein. Abdomen untufted, in the ♀ obtusely terminated.

The genus resembles *Oncoenemis* in some respects, and particularly the whitish forms like *cibalis* and *gracillima*. It differs from all the naked eyed genera known to me in the peculiar armature of the fore legs, in which it resembles *Trichoclea* in some respects.

**Ceropoda stylata** n. sp. (Pl. ii, fig. 4).—General color ash-gray, black powdery, with an ocher-yellow admixture locally. Collar inferiorly with a yellow tinge. Patagiæ margined with the same tinge toward the dorsum. Primaries with an admixture of the ochereous tinge in the basal space, the ordinary spots, along the costal region and over the t. p. line. Basal line vaguely marked only. T. a. line geminate, the inner line variably distinct, the outer usually fairly well marked. In course it is outwardly oblique, and with quite long outcurves in the interspaces. T. p. line geminate, with a long outcurve over the cell, then evenly oblique to the hind margin, making an unusually wide median space. The outer line is indefinite, the inner line blackish, slightly lunulate, the included space more whitish. S. t. line obscured, feebly marked at costa. Just below the pale apex an oblique blackish shade extends inwardly, reaching the t. p. line on vein 5. On veins 3 and 4 two pale rays cross the terminal space nearly to the margin, making a prominent **W**-mark. Below this the terminal space is uniformly dusky. There is a series of black terminal dots on the veins alternating with a series of black interspaceal dots on the fringes. There is a very faint median shade line. Claviform very long and narrow, almost linear, not well marked, extending across the wide median space. There is a dusky shade through the median cell, in which the pale ordinary spots are set. The orbicular is oval, oblique, whitish, the reniform is lunate, whitish, with a gray centre. Secondaries white, with a punctiform outer line and a series of dusky terminal dots. Beneath white, with coarse powderings over the costal region and toward outer margin, and an incomplete outer line on all wings. Expands 36–38 mm.; 1.45–1.52 inches.

*Hab.*—Colorado, Bruce; Nos. 23, 208, 99.

One male and three females are before me, all save one from Mr. Bruce. The species is easily distinguished, not only by the generic characters, but by the pale ash-gray color, the unusually wide median space, leaving almost no s. t. space, and by the prominent pale **w** in the otherwise dusky terminal space.

**EUPOLIA** n. gen.

Head moderate in size, not prominent, but hardly retracted; eyes round, naked; tongue long, but not overly stout; palpi of good size, not exceeding middle of front, second joint somewhat enlarged at the tip, terminal joint short; antennæ in the male lengthily pectinated, in the female simple. The vestiture of the front consists of scale-like hair, directed straight forward, divided into superimposed tufts by the insertion of the antennæ. Front smooth. Thorax moderate, quadrate, collar and patagiæ distinct, though not prominent; dorsum with a small anterior and posterior tuft. Vestiture composed of flattened, scale-like hair. Abdomen conic, exceeding the anal angle of the secondaries, with a small loose tuft on the basal segment only. In the female the ovipositor is lengthily exerted in the specimen before me. Legs robust, moderate in length, tibiæ not



spinose, the anterior unarmed. Primaries trigonate, stumpy in appearance, the apex somewhat marked in the male, rectangular in the female. Vein 5 of the secondaries is only a little weaker than the others.

The generic name was proposed by Mr. Grote in Mr. Neumoegen's collection, but has not been sanctioned by any description so far as I can find. I believe the genus to be a good one, hence describe it under the name proposed by Mr. Grote. It has some of the appearance of certain species of *Perigia*, but is more stumpy winged, and has the lengthily pectinated male antennæ, which distinguish the genus from anything of otherwise similar structure.

**Eupolia licentiosa** n. sp. (Pl. iii, fig. 8).—Ground color ashen gray, powdery. Head and thorax concolorous, immaculate; but the ground mixed with luteous scales, which lighten the tip of the collar and the disc of the patagiæ. Primaries with all the maculation confused, mottled and broken. The basal and t. a. lines, while they are indicated and apparently geminate, are yet so confounded with the powdery ground that it is impossible to describe them. The t. p. line is somewhat better marked, outcurved over the reniform and somewhat incurved below; outwardly projected on the veins, which are blackish, through the somewhat luteous tinted subterminal space. S. t. line fairly evident, luteous, rather evenly sinuate, better defined by black scales on both sides. A broken, black terminal line; a pale line at the base of the fringes, which have also a pale central line. The claviform is small, concolorous, outlined by black scales, which are not at all distinct superiorly, but form a rather obvious line inferiorly, and thereby the only decided bit of maculation on the wing. Both the ordinary spots are large, white powdered, not defined, and only incompletely traceable. Secondaries white in both sexes, with a small black discal spot: in the male there is a blackish powdering along the outer margin, which, in the female, forms an indefinite, rather broad outer band. Beneath white, powdery, with a small discal spot on both wings, and traces of an outer line; both much more distinct in the female. Expands 27.5–29 mm.; 1.10–1.15 inches.

*Hab.*—Utah; collection Neumoegen.

One pair in good condition are before me. With the female alone at hand, there may be some difficulty in placing the insect; but where both sexes can be examined, there will be no trouble. This is one of those obscure forms, the description of which is bound to be unsatisfactory, both to the describer and to the student who may try to use it.

**Polia resoluta** n. sp. (Pl. v, fig. 5).—Ground color varying from almost white to bluish ash-gray, black powdered. Head with a black frontal line. Collar with a black, somewhat diffuse line above the middle; patagiæ with a blackish submarginal line, most evident in the paler specimens. Primaries with a blackish longitudinal shade through the middle of the basal space, and a somewhat darker terminal space. A luteous blotch over the reniform. Median lines

obsolete, except through the costal region. Basal line geminate, marked through the darker portion of the basal space. T. a. marked by smoky lunules over the costa and in the cell, else obsolete. T. p. line smoky, marked over the costal region only. An angulated median shade is variably distinct, starting obliquely outward from the costa to below the reniform, which it stains inferiorly, there bent and inwardly oblique to the margin. S. t. line black, outwardly diffuse, very irregularly dentate; inwardly oblique from below the apex, inwardly dentate in the interspaces and outwardly on the veins, two long outward teeth on veins 3 and 4, reaching the outer margin, the inward tooth in the submedian interspace sending in a long black spur, reaching the apex of the claviform. A series of black, terminal lunules, and a pale line at base of fringes. All the veins are more or less evidently black marked. The claviform is long and narrow, extending from the base to the middle of the wing, concolorous or somewhat paler, margined more or less completely by black scales. Orbicular small, oval, oblique, concolorous, more or less obviously black-ringed. Reniform large, upright, somewhat excavate outwardly, black-ringed, within which is a white annulus, centrally with a luteous stain which invades the cell. Secondaries white, a little fuscous powdered toward the outer margin and with an obvious, though broken, smoky terminal line. Beneath white, sparsely black powdered, with a smoky terminal line on all wings. Expands 38-41 mm.; 1.52-1.65 inches.

*Hab.*—Colorado, Bruce; Nos. 263, 265.

Two specimens, ♂ and ♀, in very good condition. The female is the larger, more white, with the maculation the more contrasting. From the description I thought that this might be *P. ædon* Grt., and indeed the type of maculation is very similar. In the new species it is much more contrasting, however, almost as clean cut as in *epichysis* or *theodori*, than which the new species is smaller. Unlike these others, the antennæ of the male are pectinated, as in *illepida*, which, with the same general type of maculation, has an even dark gray ground color and very distinct median lines.

***Polia contadina*** n. sp. (Pl. iii, fig. 1)—Ground color of head, thorax and primaries white, with a bluish tinge and with black markings and powderings. Palpi smoky; head in front with a black transverse line, and a black line between the antennæ. Collar with a broad, median, black line, black tipped at the base of the well-marked anterior tuft. The disc narrowly black centered, the patagiæ with a narrow discal submargin and a broad black line at the base of the wings. Primaries to the t. a. line mottled with black scales, a short basal streak in the submedian interspace, and another along the inner margin. Basal half line distinct, geminate, the outer line with a broad outward angulation. T. a. line geminate, distinct, quite evenly oblique outwardly, the inner line interrupted and fragmentary, the outer emphasized by the dark filling of the median space. T. p. line geminate, the outer line consisting rather of a powdery shade, the inner better defined, crenulate beyond the cell and with a long inward tooth or sinus in the submedian interspace, cutting nearly through the median space. This latter is blackish smoky, except on the costa, where it is broken by white spots, and in the cell, where the ordinary spots are white and

prominent. S. t. line fragmentary, marked only by preceding and following marks and blotches which indicate a W- mark in the usual place. The preceding costal and following anal patches are the most prominent. A series of well-marked terminal lunules. Claviform concolorous, marked by a pair of narrow black lines which extend across the median space opposite the sinus from the t. p. line. The ordinary spots are large, white and contrasting; the orbicular broadly oval, somewhat oblique, the centre black dotted; reniform upright, rather indefinite, with a powdery black central line. Abdomen blackish. Secondaries smoky, with a dull discal lunule and a broad, extra median shade, beyond which the margin is lightened by white scales. Beneath, blackish powdery, with a large discal spot and a paler outer marginal band on both wings. Expands 38 mm.; 1.52 inches.

*Hab.*—Victoria, British Columbia.

The type is a single ♂, in good condition, from Mr. Neumoegen's collection, taken by Mr. W. H. Danby, of Victoria. The species is a very distinct one, and differs from anything at present known to me. It is nearest to *P. medialis* Grt. in appearance, structure and maculation; but is smaller, narrower winged, with much sharper contrasts and less defined median lines. The antennæ are brush-like, also agreeing with *medialis* in this respect.

***Polia connecta*** n. sp. (Pl. iii, fig. 2)—Ground color ashen gray over a faint fuscous luteous base. Head inferiorly grayish. Collar gray, with a black transverse line below the tip. Thoracic disc gray, the tuftings distinct; patagiæ with the disc whitish, broadly black margined. Primaries of the ground color, the normal markings distinct. Basal line geminate, black, the included space whitish. T. a. line geminate, the inner line indistinct, the outer black, distinct, outwardly oblique, obtusely angulated in the interspaces, except that below vein 1 there is a more prominent outward angulation; a whitish shade is included between the defining lines. T. p. line geminate, the outer line vague, concolorous, inner line black, distinct, included space whitish. The line is outcurved over the cell, and rather feebly marked, thence inwardly oblique, nearly parallel with the outer margin, and dentate to the submedian interspace, where it is inwardly curved, and followed outwardly by a somewhat prominent white shade. S. t. line narrow, whitish, rather obscurely marked, except on veins 3 and 4, where it forms a fairly distinct W. It is accompanied by a fuscous shading, preceded at about its middle by black dashes, and followed toward the apex and anal angle by blackish lines. A lunate, black, terminal line. The fringes are of the ground color, interlined and based by narrow whitish lines. In the basal space is a short black streak in the cell, a longer, more prominent streak in the submedian interspace, below which the color darkens, and a short dash on the margin. Ordinary spots large, the orbicular somewhat irregular, faintly outlined, whitish. Reniform upright, broadly kidney-shaped, black margined, inwardly annulated with whitish, the centre gray with blackish powderings. Claviform large, extending almost across the median space, defined by a distinct, narrow, black line, and inferiorly margined by a blackish shade which connects the median lines and darkens the lower portion of the median space. A median shade arises on the costa and parallel with the t. p. line to the margin. Secondaries white, with

black powderings on the veins, a blackish discal lunule, and a distinct, though narrow marginal band. Fringes blackish, with a white line at base. Beneath white, powdery, both wings with a marginal, somewhat lunate black line, and an ovate discal mark; primaries with a somewhat vague median line. Expands 40 mm.; 1.60 inches.

*Hab.*—Glenwood Springs, Colo., September; Dr. Wm. Barnes, No. 41.

A single male specimen only, which at first sight resembles a *Mamestra* allied to *subjuncta*.

The antennæ are serrated, the teeth set with bristle tufts. The wings are narrower than in *medialis*, and more as in *ædon*; the fringes are somewhat excised and, altogether, the species is quite distinct from any of the described forms known to me.

**Hydrœcia unimoda** n. sp. (Pl. i, row 2, fig. 6).—Ground color a dull powdery luteous with a reddish or purplish admixture, most marked on the thoracic disc. Head and thorax else concolorous. Primaries with a vague yellow blotch at base, and a distinctly limited patch at apex. There is a lighter purplish red powdering in the basal space, and a very much more distinct shade in the s. t. space. The terminal space is darker. Basal line geminate, brown, interrupted, sometimes almost obsolete. T. a. line geminate, brown, incomplete, irregular, almost upright, and with a wide outcurve in the space below the submedian vein only. T. p. line geminate, brown, the inner line lunulate, continuous, the outer line more even and somewhat more diffuse, included space of ground color. In course it is only a little outcurved over the cell and almost evenly oblique below that point. S. t. line lunulate, interrupted, rather even in course, more or less marked, and sometimes accompanied by a yellow shade. A pale line at the base of the fringes, which are darker than the wing. A fairly obvious, rather diffuse brown, median shade, outwardly bent between the ordinary spots, and evenly oblique inwardly, below. The ordinary spots are small, ill-defined, and very little paler than the ground color. The claviform seems obsolete in the specimen before me. Secondaries paler, more sordid luteous, with fuscous powdering, a discal lunule, a median line, a faint trace of an outer line and a dark line at the base of the paler fringes. Beneath paler, powdery, with an outer dark line, and on secondaries a small discal spot. Expands 36-39 mm.; 1.44-1.56 inches.

*Hab.*—Colorado, Bruce (Nos. 122, 244).

Two male specimens are before me, differing somewhat in the intensity of the ground color, but not otherwise. The antennæ are simple, with a ciliation of fine hair. The anterior tuft of the thorax is prominent, much as in *H. nitela*, while the type of maculation is not unlike that of the *rutila* series.

**Hydrœcia senilis** n. sp. (Pl. i, row 1, fig. 6).—General color a pale reddish luteous, scarcely rusty, yet verging on that shade. Head and thorax concolorous, immaculate. Primaries very evenly colored. Basal line vaguely traceable, geminate. The median lines are geminate, the defining lines of a darker shade of the ground color, slender and unusually separated, so that there is a very

broad included space. T. a. line upright, with an outward angulation in each interspace. T. p. line with a rather even, broad outcurve over the cell, below which it is slightly incurved. S. t. line faint, narrow, very slightly paler, or marked only by the very faint contrast between the terminal and s. t. spaces. A faintly paler line at base of fringes. The claviform is concolorous, moderate, outlined by the same brown of the median lines, by which also the ordinary spots are defined. The latter are more yellow, somewhat concolorous; the orbicular small, round, the reniform upright, broad, slightly constricted medially. Secondaries more yellowish, more fuscous in the male, slightly darker outwardly, fringes paler. Beneath, more yellowish, with pink powderings, immaculate. Expands 37-38 mm.; 1.48-1.52 inches.

*Hab.*—Colorado, Bruce (Nos. 26 ♂, 206 ♀).

The thoracic vestiture is somewhat loose, there is a small keel-like dorsal tuft, and in the male the antennæ are furnished with lateral tufts of bristles; but the joints are scarcely produced.

The species has a very strong superficial resemblance to *Pachnobia pectinata* Grt. (*ferruginoides* Smith), save that is larger and paler, and of course has other generic characters. Both sexes are before me; in the female the ovipositor is somewhat extruded and the valves are double.

***Hydroecia medialis* n. sp.** (Pl. i, row 1, fig. 5)—Ground color varying from a rusty luteous to a reddish gray over yellow, the median space of the primaries contrasting, deeper brown. Head and thorax concolorous, immaculate. Basal line wanting. T. a. line narrow, single, slightly paler, outwardly oblique to the middle, then straight to the hind margin. T. p. line distinctly paler, single, with a long outcurve on the costa, then almost rigidly oblique to the hind margin, so that at this point the median space is rather more than one-half as wide as it is on the subcostal vein. S. t. line obsolete, the terminal space darkened somewhat by brown powderings. A paler terminal line at the base of fringes, which are rather darker than ground color. The ordinary spots are somewhat vaguely defined in the dark median space, and sometimes almost obsolete. When they are best marked they are slightly paler than the surrounding brown and narrowly brown ringed; both of moderate size, the orbicular oval, oblique, the reniform kidney-shaped. The claviform is wanting in the specimens I have seen. Secondaries yellowish, powdery, somewhat darker outwardly, fringes with a rosy tinge. A somewhat indistinct median line. Beneath pale, with reddish powderings. A dull fuscous outer line and a discal lunule on all the wings. Expands 43-45 mm.; 1.72-1.80 inches.

*Hab.*—Colorado, Bruce (No. 138).

This species is easily recognized by the contrasting dark median space, in this unlike *obliqua*, which it otherwise resembles most nearly in appearance. Both sexes are before me, and other specimens are in collections. I believe that Mr. Bruce took a number of specimens some years ago; but I have hesitated about describing it, fearing that it might be one of the species with which I was not acquainted.

There is a sharp crest behind the collar, keel-like and simple, and the antennæ of the male are brush-like, *i. e.*, there is a conic lateral process to each side of each joint, which is furnished at tip with a tuft of bristles.

***Leucania heterodoxa*** n. sp. (Pl. v, fig. 7)—Ground color dull luteous. Head paler, gray. Collar grayish white, with a central blackish line, above which follow a narrow gray line, a broad line of ground color, and a pale tip. Patagiæ submargined by black scales, and with a blackish shade at the base of the wing. Primaries shaded with whitish gray over the costa. All the veins white marked, interspaces with darker lines, so that the wing has a strigate appearance. A smoky shade on each side of the median vein, emphasized by a variably evident dot in the cell at its end. This smoky shade also obtains in the s. t. space on the costa, in an oblique triangular patch extending from the margin below the apex to the t. p. line on vein 3. A smaller cloud opposite the anal angle. T. p. line distinct, consisting of a series of black venular dots. A series of black interspaceal terminal dots. A pale line at the base of the dusky fringes. Secondaries smoky, paler basally, veins smoky. Beneath paler, powdery, primaries smoky on the disc, and with an incomplete, punctiform outer line. Expands 31–34 mm.; 1.25–1.36 inches.

*Hab.*—Sierra Nevada, California, Edwards; Laggan, British Columbia, 5000 feet, July 2, Bean, No. 504; St. Anthony Park, Minn., Lugger.

Four specimens, ♂ and ♀, all in good condition. The species is perhaps nearest to *adonea*, but decidedly smaller, less contrasting; secondaries are also more whitish.

***Leucania minorata*** n. sp. (Pl. v, fig. 11)—Ground color dull luteous. Head and thorax immaculate, with an olivaceous tinge. Primaries with a reddish tinge, all the veins pale, the interspaces strigate with pale lines. Median vein relieved more prominently by a smoky shade below it. A small black dot in the cell at the end of the median vein and similar dots on veins 2 and 5, indicating the t. p. line. A series of minute terminal dots. Secondaries densely black powdered over a whitish base, the veins more prominently relieved, fringes white. Beneath whitish, black powdered, primaries with disc smoky, faintly showing a large discal spot. Secondaries with an interrupted outer band and a distinct discal spot. Expands 31–32 mm.; 1.24–1.28 inches.

*Hab.*—California; Oregon.

Three male specimens are before me. They most nearly resemble *oxygale* Grt., but are smaller throughout, the ground color reddish, the secondaries darker, and the male characters are distinctive. A description of these characters will be reserved until I can prepare a revision of all the species of the genus.

***Leucania roseola*** n. var. ***fareta*** (Pl. v, fig. 9)—Resembles *farcta* in all particulars, save that instead of being a very pale luteous, the ground color is distinctly reddish, and the white of the secondaries is tinged with yellowish. Expands as in the type form.

*Hab.*—British Columbia.

One male specimen from Mr. Neumoegen's collection. I should not be much surprised if larger material and more critical examination of structural characters proved this a distinct species. At present I can find nothing to separate it from the Californian *fareta*, save the color; but this is quite marked enough to authorize a varietal term in this genus.

**Leucania imperfecta** n. sp. (Pl. v, fig. 10)—Ground color a dull luteous. Collar lined, patagiæ blackish at base of wings. Primaries clouded with smoky; most obviously so over the costal region beyond the middle, along the internal margin, beginning a short distance from base, over the median vein and beyond it, filling the entire terminal space. The streak along and over the median vein is the darkest part of the wing, and at the end of the wing it is relieved by a white mark extending on the vein over the base of veins 3 and 4. A black dot in the cell at the end of the median vein. A series of small, black, venular dots indicate the t. p. line. All the veins are smoky, and in the interspaces above vein 3 there are brown streaks shortening rapidly toward the apex. Fringes smoky. Secondaries semi-transparent, whitish at base, veins smoky, a smoky powdering outwardly forming a vague dusky outer margin. Beneath, primaries smoky, veins darker. Secondaries whitish, powdery over the costal region. Expands 35 mm.; 1.40 inches.

*Hab.*—Arizona, Neumoegen, one male.

The species has a decided resemblance to *subpunctata* Harvey, with more the maculation of *phragmatidicola*. The primaries are darker than in any species known to me except *unipuncta*, but are not powdery.

**Leucania stolata** Grt. (Pl. v, fig. 8)—Ground color a pale straw-yellow, lighter than *pallens*. Collar dusky tipped, and with a dusky line near tip. Patagiæ with a dusky powdering near margin. Primaries with the median vein white, a short spur marking the inception of vein 2, while veins 3 and 4 are white a little distance from their point of inception. A smoky brown shade accompanies this line inferiorly, and extends beyond the cell as an elongate dusky triangle between veins 4 and 6, fading out before the margin is reached. A less distinct brownish shade extends along the inner margin, and a vague smoky tinge is apparent over the costal and apical region. Between the veins, beyond the cell, are faint, darker longitudinal lines, giving the wings there a feeble strigate appearance. A row of small black terminal dots and a small dot in the cell at the end of the median vein. Secondaries white. Beneath white, feebly irrorate, primaries with a somewhat yellowish tinge. Expands 32 mm.; 1.28 inches.

*Hab.*—Arizona, Neumoegen.

A single female from Mr. Neumoegen's collection is marked "*Heliophila stolata* Grote Type." I cannot find any description of the species; but present the above, under Mr. Grote's name, as the species seems to be a good one. The species is quite different from any other known to me by the straw-colored primaries and clear white secondaries.

**Adipsophanes egestis** Grt. (Pl. v, fig. 14)—Ground color rusty luteous, with red-brown powderings. Head and thorax concolorous. Primaries with an admixture of black scales in the powdering, somewhat darkening the median space. All the maculation obsolete. The median lines are indicated only by the slight contrast in color between the median space and the rest of the wing. The veins are darker, and there is a tendency to a brown strigation of the interspaces most obvious outwardly. A series of dusky terminal lunules. Fringes rather long, dusky at base, with a narrow, pale, median interline, beyond which they are cut with reddish luteous. Secondaries soiled yellowish white, smoky powdered outwardly; fringes white. Beneath whitish, powdery, most obviously so on primaries, which are somewhat darker. Expands 26 mm.; 1.05 inches.

*Hab.*—Prescott, Ariz., Neumoegen.

A single female specimen in fair condition in Mr. Neumoegen's collection is marked "*Adipsophanes egestis* Grote Type." I know of no description, and hence offer the above, under Mr. Grote's name, to supplement what Mr. Grote may have published elsewhere.

**Caradrina mantalini** n. sp. (Pl. v, fig. 13)—Ground color sordid smoky fuscous, with a slight glisten. Thorax paler, with a reddish gray tinge on the dorsum. Primaries above the median vein and outwardly to the t. p. line, pale luteous, powdery, so as to be not greatly contrasting. All the veins blackish marked. Of the transverse line the t. p. only is marked, punctiform, single, unusually removed outwardly, parallel with outer margin. Ordinary spots indefinite, orbicular very long and narrow, decumbent, dusky centered, and with a faint dusky outline, the intervening space luteous. Reniform moderate, upright, dusky, without distinct outline. Secondaries glistening, soiled yellowish white, veins darker. Beneath dirty whitish, powdery, with traces of a common outer line. Expands 25–28 mm.; 1.00–1.12 inches.

*Hab.*—Colorado, Bruce, No. 386; Glenwood Springs, Colo., September, Dr. Barnes.

Two female specimens, the larger from Dr. Barnes, neither of them perfect. The species is an ally of *C. miranda* Grt., which is perhaps not strictly congeneric with the other species. The primaries are perhaps even more parallel and more rounded apically than in *miranda*.

**Caradrina punctivena** n. sp. (Pl. v, fig. 12)—Ground color a pale reddish gray over a yellowish base. Head and thorax immaculate. Primaries darker below the median vein and vein 4, the difference in color distinct, though scarcely contrasting. All the veins marked with black and white scales, the former predominating. A blackish streak extends from the base through the submedian space nearly to the middle of the wing, above which is a pale streak, indicating the claviform, and this is the only trace of the usual ornamentation. A broken dusky line at the base of the rather long dusky fringes, which are paler cut. Secondaries sordid whitish luteous, veins dusky. Beneath whitish, powdery, without other maculation. Expands 28–29 mm.; 1.12–1.16 inches.

*Hab.*—Colorado, Bruce, No. 279; McLean, British Columbia, July 24th, at light; Bean, No. 3673.



One male and one female; the former somewhat rubbed. This also is an ally of *C. miranda*; but yet more nearly related to *mantalini*, from which it differs by the larger size, difference in color, and absence of the ordinary spots and all transverse lines.

**Tæniocampa ferrigera** n. sp. (Pl. v, fig. 6)—Ground color rather bright red-brown on a somewhat rusty base. Head and thorax concolorous, vestiture hairy, dense, but somewhat fluffy or woolly. Primaries powdery, the transverse maculation a deeper red-brown. A white costal spot at the inception of the basal and t. a. lines and of the median shade; three small white costal dots in the s. t. space. Basal line geminate, red-brown, the included space slightly paler; slightly outcurved. T. a. line geminate, the inner line scarcely traceable, except on the costa; outer line brown and rather even, the line as a whole outwardly oblique and with a slight outcurve. T. p. line geminate, the outer line punctiform, consisting of venular dark, followed by white dots; inner line feebly lunulate, feebly bisinuate. Beyond the white venular dotlets the s. t. space darkens to the s. t. line, which is thereby emphasized and is pale, lunate and slightly irregular. A series of small, interspaceal, dark terminal lunules, fringes concolorous. A diffuse, slightly darker red-brown, almost upright median shade. Claviform wanting. Orbicular obsolete. Reniform moderate, upright, dusky, not distinctly defined. Secondaries paler, a faint carmine flush over a yellowish white base, black powdered, in the female very densely so. Beneath whitish, with a reddish flush, irrorate with black scales; a distinct discal spot, extra median line and scalloped terminal line black. Expands 36–39 mm.; 1.44–1.56 inches.

*Hab.*—Vancouver, Neumoegen; Oregon, Dyar.

Three specimens, one ♂ two ♀ are before me; one ♀ from Mr. Neumoegen is in very good condition. The Oregon specimens were taken at light, and the ♂ is fair, the ♀ ragged.

The male antennæ are pectinated, and the insect thus belongs to the group *incincta*, and is most nearly related to *pectinata*. It differs, however, in the entire outer margin, the totally different ground color, and the shorter, less lengthily pectinated male antennæ. The insect is quite robust, the loose thoracic vestiture enhancing the plumpness of its appearance.

**Xylomiges cognata** n. sp. (Pl. v, fig. 3)—Ground color ash-gray, with a somewhat localized tinging of sordid luteous. Front of head smoky, with an indefinite blackish line. Collar with a blackish line. Patagiæ with a submarginal black, rather diffuse line, and a black margin at base of wings. Primaries powdered with blackish, most densely in basal space, over the costal region, along inner margin in median space and in the terminal space. Basal line geminate, blackish, included space pale, a little angulated on the median vein. T. a. line geminate, interrupted, inner line slender, smoky, outer line black, a little bent in the cell, outcurved in the submedian interspace, and below vein 1. Included space pale. T. p. line geminate, interrupted, outer line marked in the costal region and near inner margin, inner line denticulate, blackish, bisinuate.

S. t. line paler gray, rather even, with little outward teeth on veins 3 and 4, preceded by a more or less marked blackish shade, broken into spots, and followed by a blackish shade which may be broken into spots or may be continuous and fill much the greater part of the terminal space. A series of black terminal lunules, preceded and emphasized by a crenulated white preceded line. Fringes gray, marked with fuscous lunules. A vague, incomplete, median shade line, darkening the cell between the ordinary spots, thence obsolete, to reappear again below the claviform. Claviform moderate or small, wide, black margined, with a luteous tinge. Orbicular large, round, black-ringed, concolorous or paler. Reniform large, broadly kidney-shaped, black-ringed, concolorous or paler, centrally with a darker lunule. Secondaries white, with a more or less evident, but always faint luteous tinge. A black discal spot, a more or less continuous powdery median line and a broken blackish terminal line. Beneath white, powdery. All wings with a distinct, round, blackish discal spot, a more or less complete extra median line, and a broken terminal line. Expands 34-36 mm.; 1.36-1.44 inches.

*Hab.*—Vancouver (Neumoegen); Oregon (Strecker); Colorado (Bruce, No. 311).

Three male specimens are before me, and I have seen others. The antennæ are pectinated, and the species is thus related to *hiemalis* and *peritalis*, most nearly to the latter. In fact, I considered it a variety at first, and so named it for Messrs. Strecker and Neumoegen. Additional material shows no nearer approach to typical *peritalis*, but emphasizes the difference, and I must therefore regard it as distinct. It differs in the much more evident transverse maculation, the want of a black basal dash, the sordid tinging in the ground color, and, finally, in having the antennal branches somewhat longer. Withal the relationship is not distant.

**Xylomiges candida** n. sp. (Pl. v, fig. 1) —Ashen-gray with black powderings. Collar with an inconspicuous blackish median line. Patagæ with a broader submarginal line, dorsum with blackish powderings intermixed. Primaries with all the transverse maculations present. Basal line geminate, black with rather long, acute, outward angulations in the costa and in the submedian interspace. Above the submedian vein the basal space is quite considerably darkened by the black powderings. T. a. line geminate, the inner line lost in the dark powderings of the basal space, outer line black, as a whole upright, with a small outward angulation over the costa, a more prominent one in the submedian interspace, and a moderate outcurve below vein 1. T. p. line geminate, outer line even, rather indefinite, inner line crenulate; as a whole the line is rather evenly bisinuate, the included space paler than ground color. A broad, somewhat diffuse black median shade extends obliquely from costa through the cell, darkening the reniform inferiorly and then forming a broad black margin to the inner portion of the t. p. line. S. t. line even, faintly marked, paler, emphasized by a series of preceding black spots. Fringes irregular, smoky, a series of small black dots at base, and with small pale rays over the veins, not extending to the margin. The veins are all more or less black marked. Claviform

small, black margined, else concolorous. Orbicular moderate in size, round, black ringed, with a small central black dot, else concolorous. Reniform rather large, upright, inferiorly dilated, not well defined, obscured by the median shade, and by a small brownish central blotch. Secondaries white, with an outer line of black venular dots, and a smoky terminal line which does not extend to the anal angle. Beneath white, black powdered, more evidently so on costal margin and in apical region of all wings. All wings with a discal spot, a punctiform outer line, and a series of terminal dots, black. Primaries with the outer half of the wings smoky. Expands 38 mm.; 1.52 inches.

*Hab.*—Vancouver.

A single perfect male, from Mr. Neumoegen's collection. The species has serrate male antennæ and narrow, subequal primaries, and is therefore a close ally of *dolosa*, than which it is larger, quite different in the predominating gray shade, and with the maculation much more distinct. The secondaries also are pure white in the new species. In fact, while black is the predominating shade in *dolosa*, the markings picked out in white, the exact reverse is the case in *candida*. There should be no difficulty in recognizing the species.

**Xylomiges indurata** n. sp. (Pl. iv. fig. 7)—Ground color ashen gray; varying from rather light whitish to a deep bluish or blackish tint. Head and thorax concolorous, the collar with a vague, almost obsolete median transverse line, below which there is in some of the specimens a faint rufous tinge. Patagiæ indistinctly submargined in black. Primaries with the veins black marked. The median lines are obsolete. S. t. line interrupted, the spots lunate, somewhat pale reddish, preceded by deep brown shadings. Claviform moderate, concolorous, rather faintly outlined by blackish scales. Orbicular oval, decumbent, outlined by a gray or reddish annulus, sometimes scarcely traceable. Reniform large, indefinitely outlined by pale or reddish scales, centrally constricted and inferiorly dilated; a vague, indefinite, and more or less obvious reddish brown shade usually lightens up the reniform centrally and extends outwardly a little distancé. Secondaries white, more or less irrorate with black scales, usually darkening the veins and forming a series of terminal lunules; a distinct discal lunule. Beneath whitish gray, varying to bluish gray, powdery; secondaries paler, a common broken outer line and a discal spot on all wings. Expands 35–40 mm.; 1.45–1.60 inches.

*Hab.*—Colorado, Bruce, Nos. 523, 528, 542.

I have seen two males and two females, of which three from Mr. Bruce are before me. The antennæ are serrated and bristled, the primaries narrow and pointed, and the species is hence allied to *curialis* and *dolosa*, most nearly to the former. In *curialis* the transverse lines are all traceable, usually distinct, and the secondaries are pure white in the male; in the new form the markings are almost entirely obsolete, the s. t. only being at all distinct, and the secondaries are of a dirty white, powdered with coarse black speckles.

No two of the specimens which I have seen are alike, and yet the variation is rather in depth of ground color and the relative distinctness of the slight markings, than in any real difference of ornamentation.

**Xylomiges pulchella** n. sp. (Pl. v, fig. 2).—Ground color a fine carneau gray, powdered with reddish and black scales. Head darker in front, with a blackish transverse line and the sides of the palpi blackish. Collar unlined, patagiæ with a submarginal powdery blackish line. Primaries with basal space black filled, except above the basal streak and to the basal half line, where the ground color obtains. Subterminal and terminal spaces except for the gray apical patch, also black-filled. A red-brown shade over the reniform to the t. p. line. All the lines well marked. Basal line geminate, brown, extending to the black basal streak in the submedian interspace and with it inclosing the concolorous basal patch. T. a. line geminate, brown, the inner portion merged into the dark basal space, as a whole with a slight outcurve, with small outcurves in the interspaces, T. p. line geminate, the outer line merged in the dark s. t. space, the inner brown, very little bent on the veins, the line as a whole with a broad outcurve over the cell and a rather shallow incurve below. S. t. line pale gray, slender, very even, starting from the pale apical spot and contrasting prominently with the black ground through which it runs. A gray line at base of the fringes, which are black and dentate. Through the terminal space the veins are pale marked, and the fringes are cut with broader gray-brown opposite these veins. There is a rather faintly marked, irregular, brown, median line. The claviform is concolorous, brown ringed, short but very wide. Orbicular concolorous, oval, oblique, black-ringed, and with an interior pale annulus. Reniform large, upright, somewhat constricted at middle and dilated inferiorly. It is black margined, followed by a pale line inwardly; outwardly the pale line alone defines it. It is suffused with reddish centrally and becomes blackish filled inferiorly. Secondaries whitish, with a faint reddish yellow tinge, veins dusky, the powdering becoming more obvious outwardly. A distinct smoky discal lunule. Beneath whitish, black powdered, with a narrow, black, outer line, and a large discal spot on all wings. Primaries with the s. t. space partly black-filled. Expands 37 mm.; 1.48 inches.

*Hab.*—Vancouver.

A single perfect male from Mr. Neumoegen's collection is before me. The species is the most beautiful thus far described in the genus. It is an ally of *rubrica* Harvey, with much the same ground color and general type of maculation; but easily distinguished by the complete transverse lines and the contrasting black basal and outer spaces. [Other specimens have since come to hand.]

**Pleroma apposita** n. sp. (Pl. i, second row, fig. 1).—Contrasting black and white. Head, front blackish, vertex white. Palpi reddish fawn color, and this is the prevailing tint of the underside, extending to the sides of the basal segments of the abdomen. The upperside of the fore legs is darker, tip of tarsal joints white ringed. Collar white at base, superiorly black. Thoracic disc black.

Abdomen with dorsal tufts and apical segments black, the latter tipped with white scales, basal segments laterally fawn-gray. Primaries black, the basal space above the middle and the costal region nearly to the s. t. line white, crossed by a black band representing the t. a. line; a second representing the median shade above the space between the ordinary spots; and a third representing the t. p. line. The median lines except as thus represented are obsolete. The ordinary spots are not defined and are white, merging into the costal region. The claviform is vaguely traceable. The s. t. line is white, interrupted, very strongly and irregularly dentate. Fringes white, cut with smoky brown spots. Secondaries smoky fuscous, paler basally, fringes whitish, with a smoky interline. Beneath, primaries smoky, black powdered, more densely so outwardly; a blackish outer line on both pairs of wings. Expands 34 mm.; 1.32 inches.

*Hab.*—Victoria, British Columbia.

The unique male type is with Mr. Neumoegen. The species is so contrastingly marked that there can be no possible difficulty in identifying it. It is more nearly related to Mr. Grote's *Valeria conserta*, which also belongs to this genus, than it is to my *obliquata*. It is a very pretty insect indeed.

**Calocampa brucei** n. sp. (Pl. i, second row, fig. 2)—General color bluish ash-gray. Head blackish inferiorly, alternating buff and black superiorly. Collar yellowish to buff, with black and brown lines surmounting, gray at tip. Thoracic disc nearly concolorous, very slightly darker in shade than the lighter portions of the primaries. Primaries with blackish strigæ and with the veins narrowly black marked. A dusky shade of variable distinctness along the internal margin, not extending to the hind angle. A brownish or smoky shade extends along the costa to the terminal space and invades the cell between the ordinary spots. A pale, slightly pinkish shade extends beyond the reniform to the s. t. line, contrasted outwardly by a black streak above vein 5. Two triangular dusky shades are in the terminal space and the fringes are dusky. The transverse lines are incomplete and partly obsolete. The basal line is faintly indicated on the costa only. The t. a. line is indicated by geminate dusky streaks on the costa, by a geminate, diffuse lunule in the cell, and by an oblique blackish streak below the submedian vein. The t. p. line is faintly marked over the costal region only. The s. t. line marks the extent of the dusky costal shade, is visible again at the end of the black streak above vein 5, and again, very vaguely towards the internal margin. The claviform is wanting. The orbicular is oval, upright, concolorous, geminately black ringed, the inner ring less definite and with a brownish shade. The reniform is large, upright, centrally constricted, outwardly dilated superiorly. It is narrowly black margined inwardly, brown marked outwardly and centrally with a pale discal blotch. Secondaries smoky, with a darker line at the base of the fringes. Beneath smoky, with a reddish shade, the veins black powdered, both pairs with a discal spot, less evident on the primaries, and with a series of terminal black lunules. Secondaries also with an outer brown line. Expands 50 mm.; 2 inches.

*Hab.*—Colorado, Bruce.

This species most nearly resembles some forms of *cineritia*, a rather pale form of which occurs in Colorado, and as such I was at first

inclined to consider it. Mr. Bruce has, however, taken a number of specimens at high elevations, all of them alike, and has convinced me that we have to do with a good species, which I take great pleasure in dedicating to him.

**RANCORA** n. gen.

Eyes naked, with rather sparse, hairy lashes. Front smooth, with straight, projecting, scaly and hairy vestiture, forming rather well-marked superimposed tufts; between the antennæ the vertex is clothed with stiff, divergent hair. Tongue long, stout. Palpi short, stout, very slightly exceeding the front. Antennæ of the male with conic serrations, which are set with tufts of bristly hair. Thorax robust, with hairy clothing forming a somewhat improminent posterior tuft. The collar is rounded, somewhat prominent centrally, but scarcely hood-like as in *Cucullia*. The legs are stout, clothed with long hair, and the tibiæ are not spinose. Primaries elongate with pointed apices and oblique outer margin, yet scarcely lanceolate. Secondaries rather small; vein 5 much weaker than the others, and from the cross-vein. Abdomen conic, that of the male well exceeding the anal angle of the secondaries, and furnished with distinct, though loose dorsal and smaller lateral tufts.

The genus is related to *Cucullia*, from which it differs in the form of the primaries, which are not lanceolate; in the collar, which is not hood-like, and in the male antennæ, which are serrate instead of simple. It is not unlikely that *Cucullia serraticornis* may be referred here; but I have no sufficient number of specimens for comparison.

**Rancora strigata** n. sp. (Pl. i, row 1, fig. 1)—General color ash-gray. Head, with vertex, rather darker, and with a blackish transverse line below the antennæ. A distinct black line at base of collar, which is tipped with mouse-gray. Thorax with the dorsum somewhat darker, becoming blackish posteriorly. Abdomen mouse-gray. Primaries bluish ash-gray, all the veins black lined, the median lines incomplete. The t. a. line is single, vaguely marked on costa, with a distinct long outward tooth in the submedian interspace, and a shorter but similar tooth below the submedian vein. A longitudinal black line extends from the base through the submedian interspace to the apex of the tooth of the t. a. line and beyond that point less distinctly to the outer margin. The t. p. line is faintly indicated on the costa and is obsolete beyond that until it reappears as a lunate blackish mark in the submedian interspace, below which it runs, inwardly oblique to the inner margin. A series of blackish interspaceal streaks begins at the apex, the marks increasing in length to the fourth from the apex, which runs from the end of the cell to the outer margin; below this two marks are short, the third running from the lunule of the t. p. line to the outer margin,

above the line which runs through this space from the base of the wing. The ordinary spots are vaguely indicated. Between the tooth of the t. a. line and the lunule of the t. p. line in the submedian interspace there is an indefinite whitish blotch. Secondaries white, semi-transparent, and with a vague, irregular smoky outer border. Beneath, the primaries are powdery mouse-gray, the secondaries whitish, powdery, with a distinct black streak through the median cell from the base to the cross-vein. Expands 44 mm.; 1.76 inches.

*Hab.*—Victoria, British Columbia.

A single male specimen in Mr. Neumoegen's collection is the type, and from it the figure was made. The species is a strongly marked one, and should not be difficult of recognition.

***Cucullia albida*** n. sp. (Pl. iv, fig. 9)—Ground color white, with a very faint yellowish tinge. Palpi smoky at sides; vertex smoky, collar smoky at base, limited by a black line; half way to the tip is a narrow smoky line, and the tip is rather broadly margined by a smoky shade. Thoracic disc and the dorsal tufts of the abdomen smoky. Primaries with the veins smoky or blackish, the transverse lines obsolete, marked only below the internal vein and by indefinite costal shades. A black longitudinal line at base, and beyond it a clearer white elongate spot, like a claviform; but without defining line. A series of rather broad interspaceal dashes at outer margin, and the fringes cut with smoky. Secondaries whitish with a faint smoky tinge, the veins darker, the fringes white. Beneath, white with gray powdering; secondaries with a short, blackish, basal dash in the cell, extending nearly to a discal lunule. Expands 40.5 mm.; 1.62 inches.

*Hab.*—Colorado; Bruce, No. 538.

A single male specimen, somewhat rubbed. The antennæ have the joints distinctly, if not strongly, serrate; the serrations conic, and furnished with bristly tufts. The thoracic clothing is somewhat more loose than usual, and the body is more robust. This is totally unlike any other of our species, and is hence easily recognized.

#### **COPICUCULLIA** n. gen.

Has in all respects the habitus of *Cucullia*, differing primarily in the presence of a long, curved claw at the end of the fore tibia. The front bulges, is roughened in one species, furnished with a distinct protuberance in another, and is almost smooth in a third. The type of maculation is essentially that of *Cucullia*.

This generic term replaces *Cleophana* as used by Mr. Grote for our species *eulepis* and *antipoda*. The European species of *Cleophana*, an opportunity to examine which I owe to Mr. Neumoegen, differ very materially from the two American species above referred to in habitus, in wing form, in having very little resemblance to *Cucullia*, and in some details of structure.

I do not consider *Copicucullia* a very distinct genus ; but it is distinguishable by an obvious structural character, which becomes important where so great a uniformity exists in the species generally. Besides the described species above mentioned, two new forms are referable here.

***Copicucullia astigma*** n. sp. (Pl. iv, fig. 8)—Ground color ash-gray with blackish irrorations; head smoky brown. Collar with a transverse black line, above which is a slightly luteous shade, followed by a darker gray shade line before tip. Thoracic disc scarcely dusky in the male, only slightly in the female. Primaries with all the veins black marked. Internal margin blackish. A black line from base through the submedian interspace, broadening to an oblique streak above the anal angle. Blackish streaks are in the interspaces between veins 4 and 5, 6 and 7, and 8 and 9. An interrupted, dusky, terminal line. Fringes smoky, with a whitish interline. Secondaries smoky fuscous, paler and semi-transparent in the male, veins and outer margins darker, fringes more whitish. Beneath pale, even powdery gray. Expands 40-41 mm.; 1.59-1.63 inches.

*Hab.*—Colorado, Bruce.

In this species the ordinary spots and all the transverse maculation are wanting, and the black streak over the anal angle is the only prominent feature in the wing. The antennæ of the male are entirely simple, while the front has a distinct truncated protuberance.

***Copicucullia propinqua*** n. sp. (Pl. iv, fig. 11)—Ground color a bluish ash-gray; head darker, with black and blackish transverse lines. Collar with a prominent black median line, above which is a faint luteous shade and between this and the tip gray and blackish shades alternate. Thoracic disc only slightly darker. Primaries with all the veins dusky. T. a. line single, smoky brown, only a little outwardly bent between veins except beneath the internal, where it forms a long outward tooth, the return line forming a prominent black streak on the internal margin. T. p. line indicated on the costa and vaguely traceable beyond, becoming prominent in the submedian interspace, where it forms a black curved or crescent-shaped mark, beyond which a broad, oblique, angulated streak extends to the outer margin. Claviform extending across the median space, incompletely outlined, but suffused by a pale luteous shade, which makes it prominent. Ordinary spots distinct. Orbicular round, black ringed, annulated with luteous and gray centered. Reniform moderate in size, broad, black-ringed, incompletely annulate in luteous, centre smoky. An interrupted black terminal line. Two rather indefinite, oblique paler gray shades in the subterminal space. Secondaries in the male whitish, with smoky veins and outer border, and whitish fringes, in the female smoky, with darker veins and white fringes. Beneath whitish, powdery, darker, more gray in the female. Expands 41.5-44 mm.; 1.66-1.76 inches.

*Hab.*—Colorado; Bruce, Nos. 107 and 539, 1 ♂, 1 ♀.

The antennæ of the male are simple, and in both sexes the front is roughened; in the female more protuberant, almost tuberculate.



The difference in size between the sexes is quite marked; but may not be constant with larger material. So the female is more sordid, much less distinctly maculate than the male.

In general type of maculation the species resembles *antipoda* Strecker, which is, however, a much paler species throughout, a whitish, creamy gray replacing the dark bluish ash-gray of the new form.

***Alaria felicitata* n. sp.** (Pl. vi, fig. 1)—Ground color rosy red and olivaceous luteous. Front of the head lighter yellowish, vertex red. Collar red, light olivaceous tipped. Dorsum of the thorax olivaceous luteous. Abdomen with whitish hair at base. Primaries at base red, this color extending along the costa and internal margin, to the location of the terminal line; on the disc gradually merging into the olive tinge, which becomes more marked gradually and extends to the outer margin. The ordinary lines and spots are all obsolete. Secondaries even blackish, with white fringes. Beneath, primaries blackish, powdered with red along the costa, the fringes light yellow. Secondaries white, with rosy powderings along the costa. Expands 25 mm.; 1 inch.

*Hab.*—Southwestern Utah, Weidt; collection Neumoegen.

A single female specimen only is before me at the present time; but at least one other is in the U. S. National Museum, also from Utah, if I recollect aright. In type of maculation the new species is a rather close ally of the Eastern *A. florida*; but the colors are much more sordid, the secondaries are black, and the size is quite obviously smaller. There can be no difficulty in the recognition of this species.

Unlike the Eastern species, the form has the front quite bulging and the edge of the clypeus turned forward, though scarcely forming a projecting plate.

***Oxynemis sectilis* n. sp.** (Pl. vi, fig. 3)—Ground color a very pale ashen gray. Head chocolate-brown, and scales of the same color are intermixed in the vestiture of the collar. Primaries with all the markings defined by scales of the same chocolate-brown. T. a. line single, even, with a moderate outcurve. T. p. line single, even, with a broad outward angulation over the reniform, and a distinct incurve below. S. t. line marked only by a dusky s. t. shade, which is more distinct near the costa. A distinct, interrupted, terminal line. Claviform large, outlined in brown, included space more whitish. Ordinary spots large, brown ringed, whitish centered. Orbicular transversely oval, reniform upright, broad, scarcely constricted in the middle. A somewhat vague median shade darkens the outer portion of the median space. Secondaries white, immaculate. Beneath, primaries whitish, powdery, secondaries white. Expands 21 mm.; .84 inches.

*Hab.*—Texas.

A single specimen only is before me at present ; but the insect is represented in several of the collections, and by more than one specimen. I have had several for examination, and found no variation. The insect differs a little in habitus from the generic type ; but is correctly referred I think. The anterior tibia is as described for the genus, save that there is a short inner as well as a longer outer claw-like spine. The markings are remarkably neat and clean, and though there is nothing striking, yet everything is well defined.

**Oxyenemis perfundis** n. sp. (Pl. vi, fig. 6)—Ground color white, with a faint yellowish linge, more or less clothed with luteous scales, which makes the appearance darker or lighter as the case may be. Head and thorax concolorous, immaculate. Primaries with all the markings obscured and incomplete. The basal and t. a. lines are marked by blackish dots on the costa only ; the t. p. line is single, brown, slender, even and obliquely outcurved over the costal region, with small crenulations, and parallel with the outer margin below the cell. In some specimens the line is visible only through the costal region. S. t. line obsolete, marked only on the costa by a dusky patch in the s. t. space. Fringes white. The claviform is indicated in one specimen by a few black scales. The ordinary spots are vaguely traceable as slightly paler macula of moderate size ; but not defined in any way. Secondaries white, shining, with a faintly marked outer border, the fringes white. Beneath white, immaculate, the primaries with a faint yellowish tinge. Expands 19–20 mm. ; .75–.80 inches.

*Hab.*—Nueces River, Texas ; Southern Texas.

I have seen quite a number of this little species, and have had specimens for some time. It is easily recognizable, and is remarkable for the very much abbreviated anterior tibia, which is shorter than the curved claw at its tip, and much shorter than the first tarsal joint. The insect combines in its appearance the features of an Acontiid, and of an Heliothid.

**Oxyenemis nivalis** n. sp. (Pl. vi, fig. 5)—Ground color white, the head with an ocherous tinge in front ; disc of thorax and primaries with a faint grayish tinge ; secondaries snowy, immaculate. The primaries are also immaculate, only the faintest trace of an oblique median shade being visible. Beneath, primaries blackish, the margins white, the secondaries pure snow-white. Expands 26 mm. ; 1.05 inches.

*Hab.*—Texas.

This is another easily recognizable form. The anterior tibiæ are short and broad ; but not so much abbreviated as in *perfundis*, and there is a small inner claw, which is not present in the former species. The type is a perfect female from Mr. Neumoegen's collection. I think I have seen another in the National Museum material.

## EXPLANATION OF PLATES.

## PLATE I.

The figures in this plate are not numbered, and the names are here arranged as are the figures on the plate. This was first published in "Entomological News," vol. iii, No. 10, where references can be found to the other than new species figured.

- |                                     |                                   |
|-------------------------------------|-----------------------------------|
| <i>Rancora strigata</i> n. sp.      | <i>Pleroma apposita</i> n. sp.    |
| <i>Noctua flavotincta</i> n. sp.    | <i>Calocampa brucei</i> n. sp.    |
| <i>Mamestra fusco-lutea</i> n. sp.  | <i>Acronycta</i> n. sp.           |
|                                     | <i>Homohadena figurata</i> Harv.  |
| <i>Oncocnemis nigrocaput</i> n. sp. | <i>Oncocnemis extranea</i> n. sp. |
| <i>Hydræcia medialis</i> n. sp.     | <i>Carneades conjuncta</i> Smith. |
| <i>Hydræcia senilis</i> n. sp.      | <i>Hydræcia unimoda</i> n. sp.    |
|                                     | <i>Peridroma nigra</i> n. sp.     |
| <i>Caradrina meralis</i> Morr.      | <i>Carneades</i> n. sp.           |

The figures are about one-fifth less than natural size.

## PLATE II.

- |  |   |
|--|---|
| 1. <i>Carneades siccata</i> n. sp.     | 7. <i>Agrotiphila maculata</i> n. sp.   |
| 2. <i>Setragrotis terrifica</i> n. sp. | 8. <i>Oncocnemis pudorata</i> n. sp.    |
| 3. <i>Carneades edictalis</i> n. sp.   | 9. <i>Agrotiphila incognita</i> n. sp.  |
| 4. <i>Cerapoda stylata</i> n. sp.      | 10. <i>Scotogramma luteola</i> n. sp.   |
| 5. <i>Oncocnemis colorado</i> n. sp.   | 11. <i>Mamestra segregata</i> n. sp.    |
| 6. <i>Mamestra languida</i> n. sp.     | 12. <i>Scotogramma uniformis</i> n. sp. |

The figures are about natural size. The plate has been previously published in "Entomological News," vol. iv, No. 3.

## PLATE III.

- |                                      |  |
|--------------------------------------|--|
| 1. <i>Polia contadina</i> n. sp.     | 6. <i>Platyperigea præacuta</i> n. sp. |
| 2. <i>Polia connecta</i> n. sp.      | 7. <i>Perigea veterata</i> n. sp.      |
| 3. <i>Neuronia americana</i> n. sp.  | 8. <i>Eupolia licentiosa</i> n. sp.    |
| 4. <i>Carneades candida</i> n. sp.   | 9. <i>Carneades audentis</i> n. sp.    |
| 5. <i>Carneades collocata</i> n. sp. | 10. <i>Carneades mitis</i> .           |

The figures are somewhat larger than natural size.

## PLATE IV.

- |                                       |  |
|---------------------------------------|--|
| 1. <i>Pronoctua typica</i> n. sp.     | 7. <i>Xylomiges indurata</i> n. sp.      |
| 2. <i>Chytonix connecta</i> n. sp.    | 8. <i>Copicucullia astigma</i> n. sp.    |
| 3. <i>Carneades lætificans</i> n. sp. | 9. <i>Cucullia albida</i> n. sp.         |
| 4. <i>Hyppa indistincta</i> n. sp.    | 10. <i>Epidemas cinerea</i> n. sp. ♂.    |
| 5. <i>Carneades titubatis</i> n. sp.  | 11. <i>Copicucullia propinqua</i> n. sp. |
| 6. <i>Carneades segregata</i> n. sp.  | 12. <i>Epidemas cinerea</i> n. sp. ♀.    |

The figures are all slightly more than natural size.

## PLATE V.

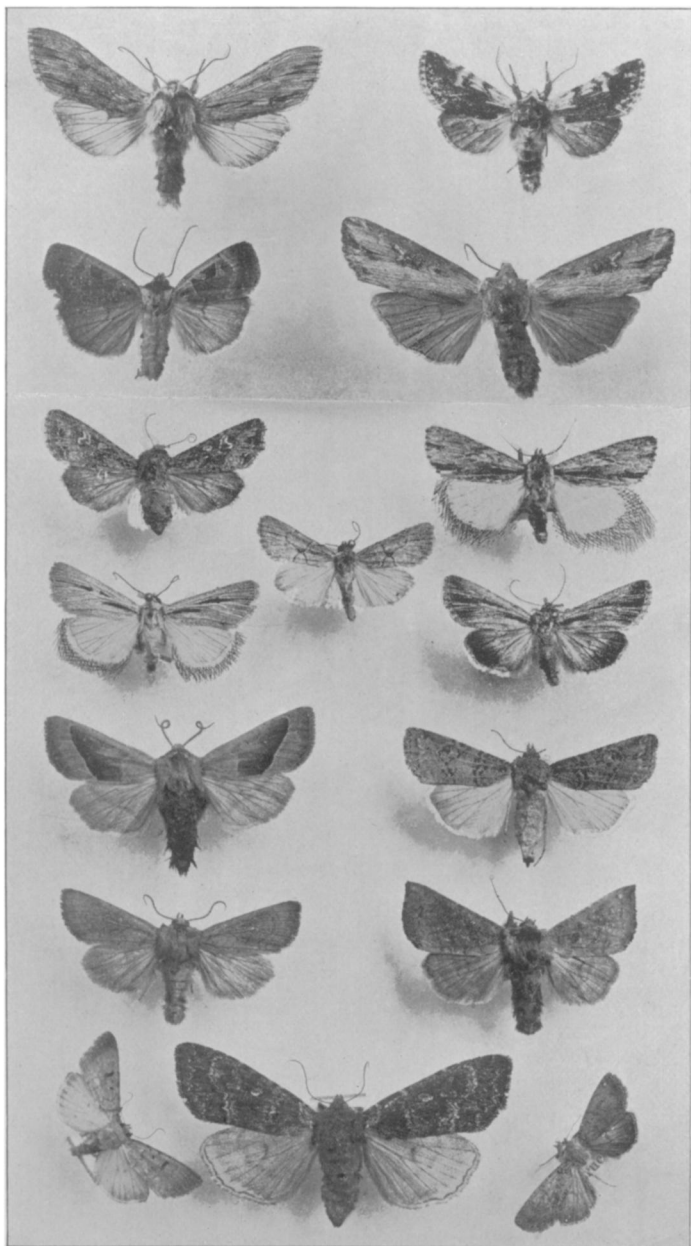
- |  |   |
|--|---|
| 1. <i>Xylomiges candida</i> n. sp.     | 8. <i>Leucania stolata</i> n. sp.                   |
| 2. <i>Xylomiges pulchella</i> n. sp.   | 9. <i>Leucania farscta</i> n. var. <i>roseola</i> . |
| 3. <i>Xylomiges cognata</i> n. sp.     | 10. <i>Leucania imperfecta</i> n. sp.               |
| 4. <i>Mamestra hadeniformis</i> n. sp. | 11. <i>Leucania minorata</i> n. sp.                 |
| 5. <i>Polia resoluta</i> n. sp.        | 12. <i>Caradrina punctivena</i> n. sp.              |
| 6. <i>Tæniocampa ferrigera</i> n. sp.  | 13. <i>Caradrina mantalini</i> n. sp.               |
| 7. <i>Leucania heterodoxa</i> n. sp.   | 14. <i>Adipsophanes egestis</i> Grt.                |

All the figures about natural size.

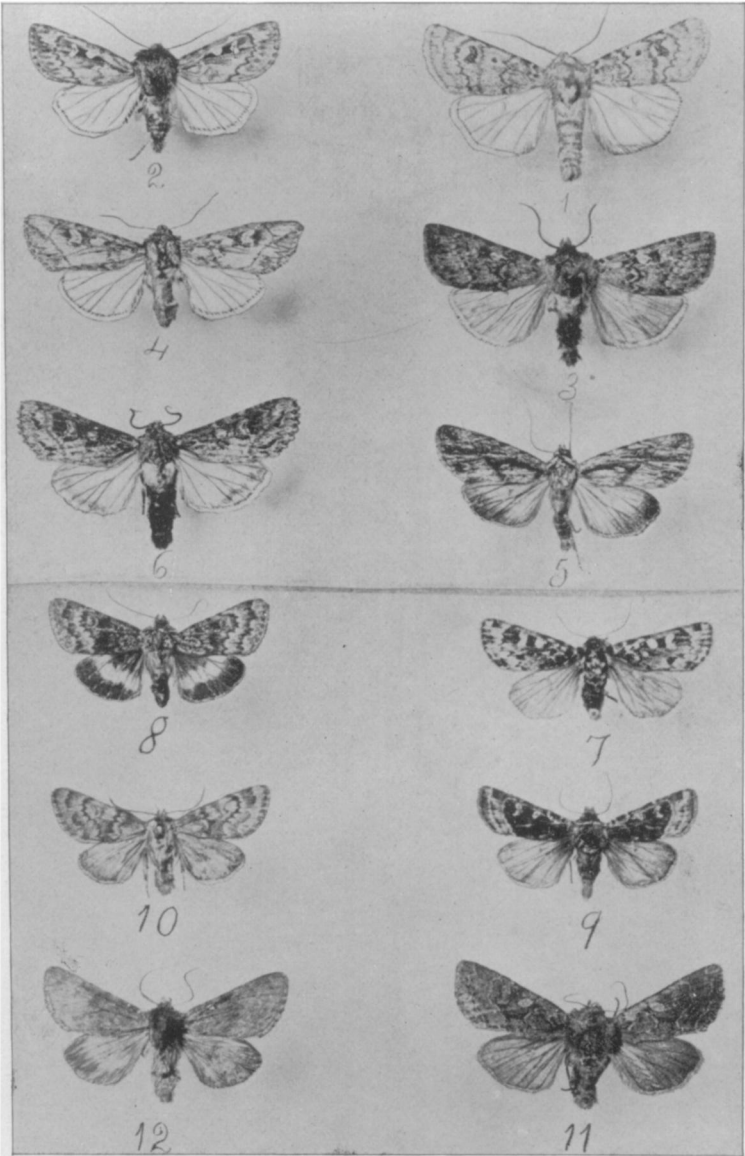
## PLATE VI.

- |                                      |  |
|--------------------------------------|--|
| 1. <i>Alaria felicitata</i> n. sp.   | 7. <i>Hadena didonea</i> n. sp.            |
| 2. <i>Schinia</i> n. sp.             | 8. <i>Oncocnemis exemplaris</i> n. sp.     |
| 3. <i>Oxyenemis sectilis</i> n. sp.  | 9. <i>Platyperigea camina</i> n. sp.       |
| 4. <i>Omia nesæa</i> Smith.          | 10. <i>Platyperigea discistriga</i> n. sp. |
| 5. <i>Oxyenemis nivalis</i> n. sp.   | 11. <i>Oncocnemis resecta</i> n. sp.       |
| 6. <i>Oxyenemis perfundis</i> n. sp. | 12. <i>Oncocnemis viriditincta</i> n. sp.  |

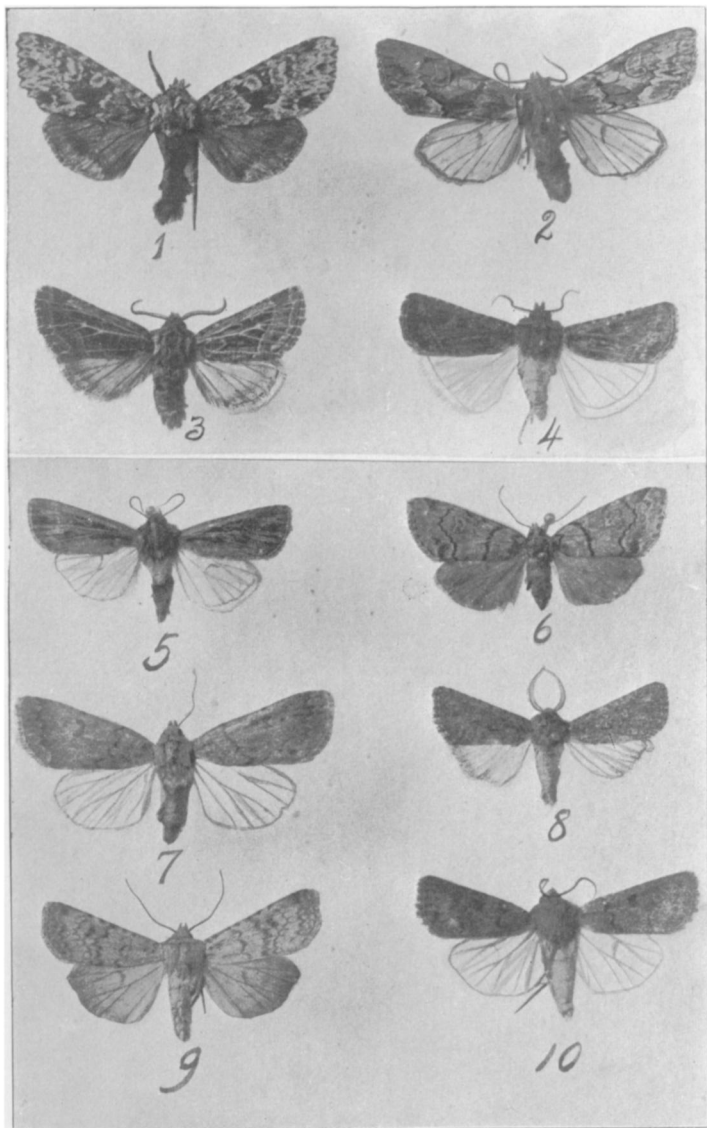
All the figures are one-fourth larger than natural size.



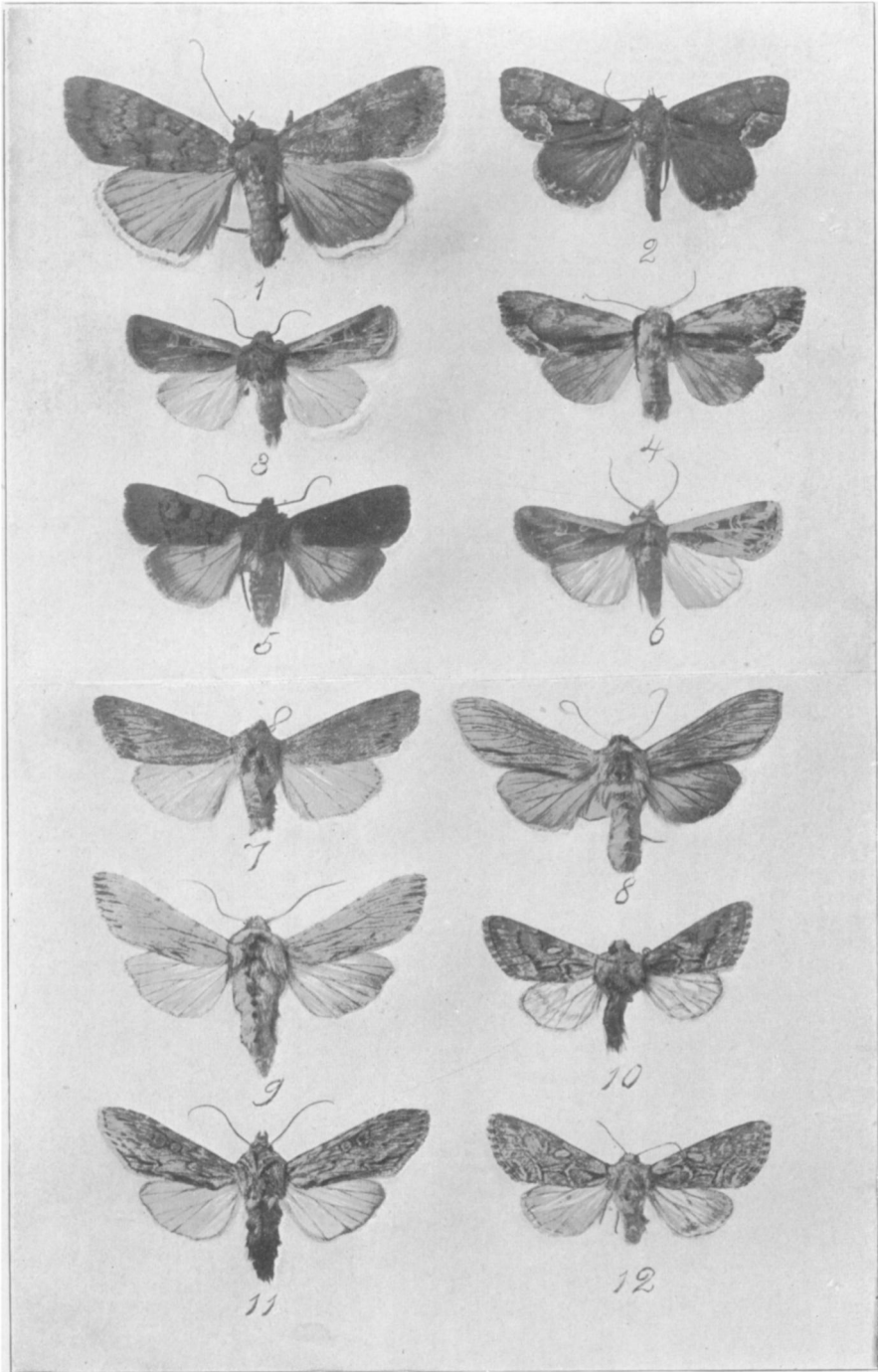
AMERICAN NOCTUIDÆ (Smith).



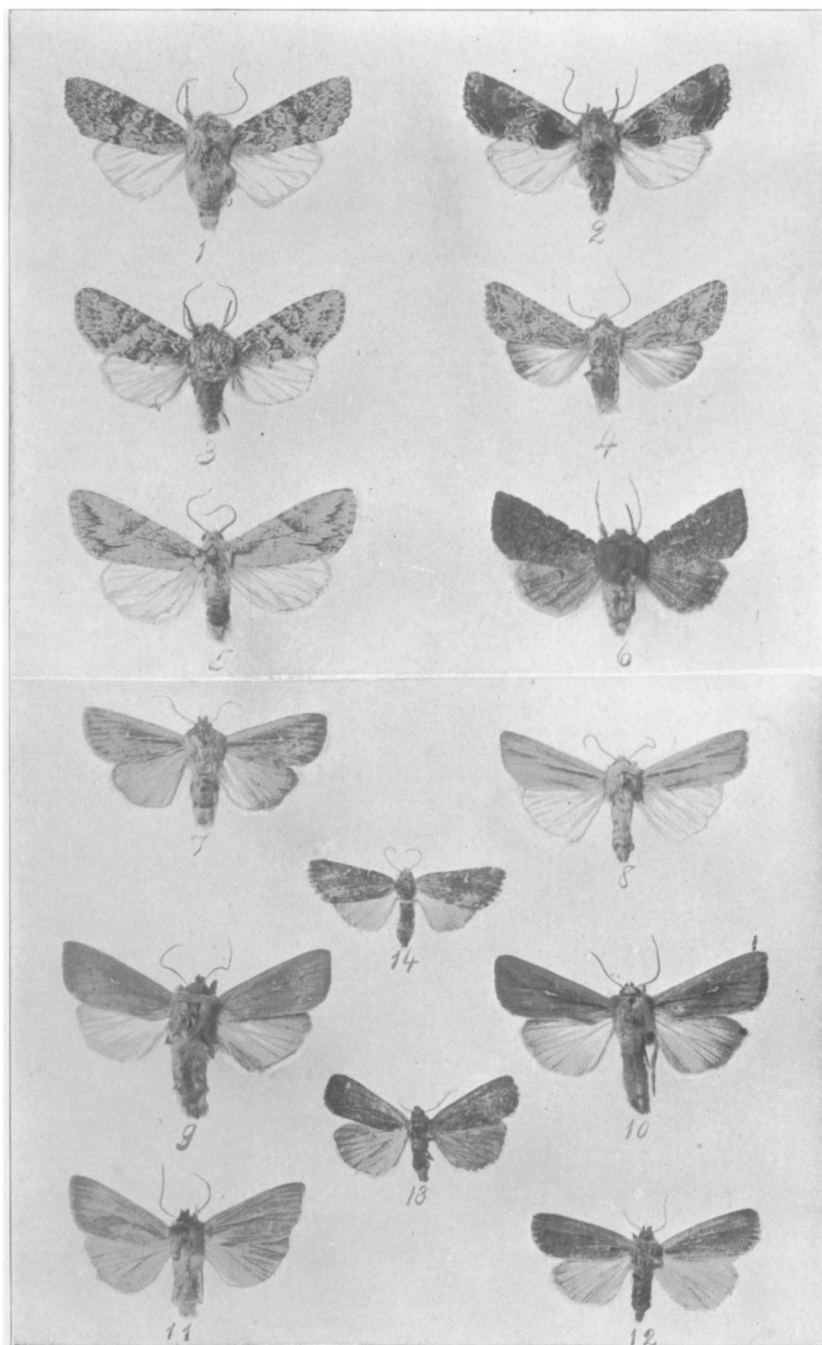
AMERICAN NOCTUIDÆ (Smith).



AMERICAN NOCTUIDÆ (Smith).

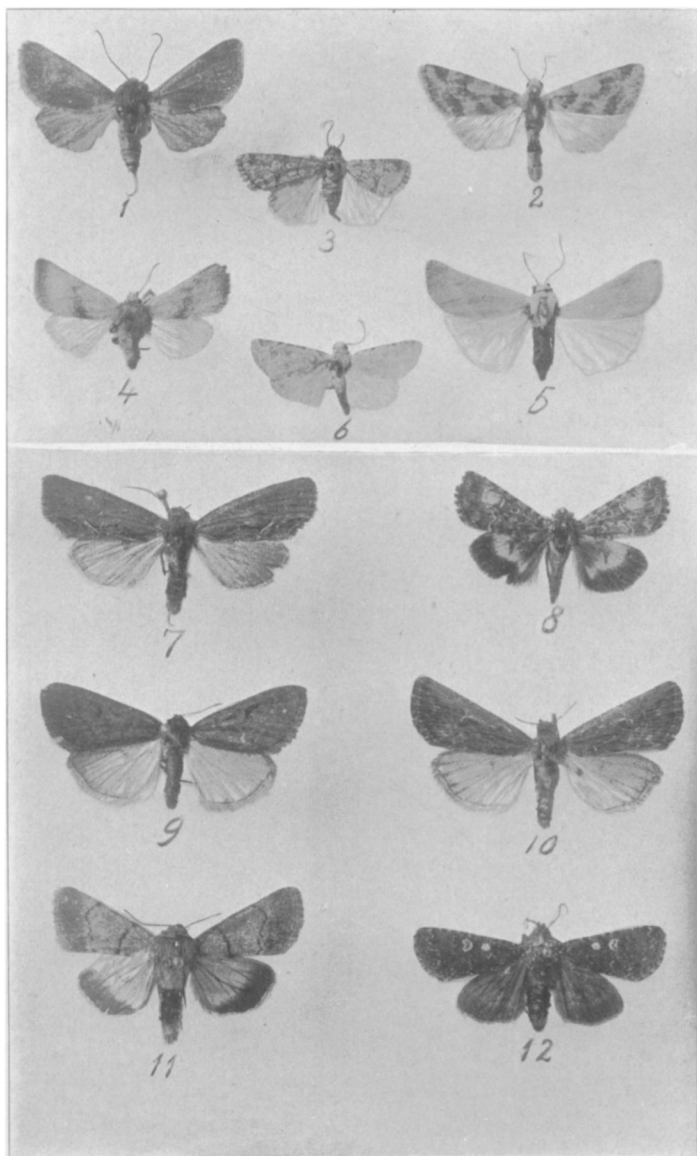


AMERICAN NOCTUIDÆ (Smith).



AMERICAN NOCTUIDÆ (Smith).





AMERICAN NOCTUIDÆ (Smith).